

DESIGNING AND CONSTRUCTION OF INTERLOCKING PAVING BLOCKS, STORM WATER DRAINAGE SYSTEMS AND ROOF SHELTERS FOR THREE STORAGE YARDS (GEC YARD, GAS STORE AND BOILER TUBE/CONVEYOR YARD).



**NEC3 Engineering & Construction Contract**

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

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

**for Designing, and construction of interlocking paving blocks, storm water drainage systems and roof shelters for three storage yards (GEC Yard, Gas Store and Boiler Tube/Conveyor Yard)**

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<b>Contents:</b>	<b>No of pages</b>
<b>Part C1 Agreements &amp; Contract Data</b>	<b>[•]</b>
<b>Part C2 Pricing Data</b>	<b>[•]</b>
<b>Part C3 Scope of Work</b>	<b>[•]</b>
<b>Part C4 Site Information</b>	<b>[•]</b>

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**CONTRACT No. [Insert at award stage]**

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DESIGNING, AND CONSTRUCTION OF INTERLOCKING PAVING BLOCKS, STORM WATER DRAINAGE SYSTEMS AND ROOF SHELTERS FOR THREE STORAGE YARDS (GEC YARD, GAS STORE AND BOILER TUBE/CONVEYOR YARD).

## Part C1: Agreements & Contract Data

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<b>Contents:</b>	<b>No of pages</b>
<b>C1.1 Form of Offer and Acceptance</b>	<b>[•]</b>
[to be inserted from Returnable Documents at award stage]	
<b>C1.2a Contract Data provided by the <i>Employer</i></b>	<b>[•]</b>
<b>C1.2b Contract Data provided by the <i>Contractor</i></b>	<b>[•]</b>
[to be inserted from Returnable Documents at award stage]	
<b>C1.3 Proforma Guarantees</b>	<b>[•]</b>

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DESIGNING, AND CONSTRUCTION OF INTERLOCKING PAVING BLOCKS, STORM WATER DRAINAGE SYSTEMS AND ROOF SHELTERS FOR THREE STORAGE YARDS (GEC YARD, GAS STORE AND BOILER TUBE/CONVEYOR YARD).

# 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:

**Designing, and construction of interlocking paving blocks, storm water drainage systems and roof shelters for three storage yards (GEC Yard, Gas Store and Boiler Tube/Conveyor Yard)**

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

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

Options B	The offered total of the Prices exclusive of VAT is	
	Sub total	
	Value Added Tax @ 15% is	
	The offered total of the amount due inclusive of VAT is <sup>1</sup>	
	(in words)	

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

Signature(s)

Name(s) \_\_\_\_\_

Capacity \_\_\_\_\_

**For the tenderer:**

\_\_\_\_\_  
(Insert name and address of organisation)

Name & signature of witness

Date

Tenderer's CIDB registration number (if applicable)

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

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**Acceptance**

By signing this part of this Form of Offer and Acceptance, the *Employer* identified below accepts the tenderer’s Offer. In consideration thereof, the *Employer* shall pay the *Contractor* the amount due in accordance with the *conditions of contract* identified in the Contract Data. Acceptance of the tenderer’s Offer shall form an agreement between the *Employer* and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- Part C1            Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
- Part C2            Pricing Data
- Part C3            Scope of Work: *Works* Information
- Part C4            Site Information

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the *Employer* during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), contact the *Employer’s* agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the *conditions of contract* identified in the Contract Data at, or just after, the date this agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy signed between them of this document, including the Schedule of Deviations (if any).

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

Signature(s)

Name(s) \_\_\_\_\_

Capacity \_\_\_\_\_

**for the Employer** *Eskom Holdings SOC Ltd  
Megawatt Park, Maxwell Drive, Sandton, Johannesburg*

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

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

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

Note:

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

No.	Subject	Details
1		
2		
3		
4		
5		
6		
7		

By the duly authorised representatives signing this Schedule of Deviations below, the *Employer* and the tenderer agree to and accept this Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the Offer agreed by the tenderer and the *Employer* during this process of Offer and Acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Form shall have any meaning or effect in the contract between the parties arising from this Agreement.

**For the tenderer:**

**For the *Employer***

Signature \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

\_\_\_\_\_

Capacity \_\_\_\_\_

\_\_\_\_\_

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

*Eskom Holdings SOC Ltd  
Megawatt Park, Maxwell Drive, Sandton,  
Johannesburg*

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

\_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_

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# C1.2 ECC3 Contract Data

## Part one - Data provided by the *Employer*

Clause	Statement	Data
<b>1.</b>	<b>General</b>	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
	dispute resolution Option and secondary Options	<b>B: Priced contract with bill of quantities</b> <b>W1: Dispute resolution procedure</b>  <b>X1: Price adjustment for inflation</b> <b>X2 Changes in the law</b> <b>X5: Sectional Completion and Delay</b>  <b>X7: Delay damages</b> <b>X13: Performance Bond</b> <b>X15: Limitation of Contractor’s liability for design to reasonable skill and care</b> <b>X16: Retention</b> <b>X18: Limitation of liability</b> <b>Z: Additional conditions of contract</b>
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> is (Name):  Address	<b>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</b>  <b>Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg</b>
10.1	The <i>Project Manager</i> is:  Address  Tel  e-mail	<b>Tutuka Power Station</b> <b>Bethal Road</b> <b>Standerton</b> <b>2430</b>

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10.1	The <i>Supervisor</i> is: (Name)	
	Address	<b>Tutuka Power Station Bethal Road Standerton 2430</b>
	Tel No.	
	e-mail	
11.2(13)	The <i>Works</i> are	<b>Supply and installation of paving, including the construction of roof shelters and stormwater drainage systems for storage facilities at Tutuka Power Station for a period of eighteen (18) months</b>
11.2(14)	The following matters will be included in the Risk Register	<ul style="list-style-type: none"> <li>• <b>Geological conditions</b></li> <li>• <b>Inclement weather (Rain, wind, snow, hailstorm, heat wave)</b></li> <li>• <b>Labour/ community unrest</b></li> <li>• <b>Management of heritage resources</b></li> <li>• <b>Noncompliance to the approved Integrated Waste Licence and Water Use Licence leading to work stoppages, fines and or prosecutions</b></li> <li>• <b>Hazards associated with the operation of construction machinery and equipment</b></li> <li>• <b>Working at heights</b></li> <li>• <b>Hazardous gas</b></li> <li>• <b>Electrocution</b></li> <li>• <b>Power supply interruptions or failure</b></li> <li>• <b>Fire and smoke</b></li> <li>• <b>Flooding from the aquifer and surface sources</b></li> <li>• <b>Snakes</b></li> <li>• <b>Steep, rocky, unstable, and slippery ground</b></li> <li>• <b>Unforeseen geological conditions. Poorer rock quality than anticipated. Unstable rock wedges. Unacceptable water inflows.</b></li> <li>• <b>Construction hazards related to reinforced concrete <i>Works</i></b></li> <li>• <b>National disaster and any other unforeseen pandemics</b></li> <li>• <b>Late material Delivery</b></li> <li>• <b>Design Alterations</b></li> </ul>
11.2(15)	The <i>boundaries of the site</i> are	<b>Tutuka Power Station</b>
11.2(16)	The Site Information is in	<b>Part C4: Site Information</b>
11.2(19)	The <i>Works</i> Information is in	<b>Part C3: Scope of Work and all documents and drawings to which it refers.</b>
12.2	The <i>law of the contract</i> is the law of	<b>The Republic of South Africa</b>
13.1	The <i>language of this contract</i> is	<b>English</b>
13.3	The <i>period for reply</i> is	<b>Seven (7) calendar days.</b>
<b>2.</b>	<b>The Contractor's main responsibilities</b>	<b>Data required by this section of the core clauses is provided by the Contractor in Part C2 and terms in italics used in this section are identified elsewhere in this Contract Data.</b>

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<b>3. Time</b>																																	
11.2(3)	The completion date for the whole of the <i>Works</i> is 18 months after contract award																																
11.2(9)	<table border="1"> <thead> <tr> <th colspan="2">The <i>key dates</i> and the <i>conditions</i> to be met are:</th> <th><b>Condition to be met</b></th> <th><b>key date</b></th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>Safety file approval</td> <td>In accordance with the Accepted Programme</td> </tr> <tr> <td>2</td> <td></td> <td>Site establishment</td> <td>In accordance with the Accepted Programme</td> </tr> <tr> <td>3</td> <td></td> <td>Investigations and design completion</td> <td>30 working days after kick -off meeting</td> </tr> <tr> <td>4</td> <td></td> <td>Completion of construction and erection of roof shelter structures and lighting installation as well as all related electrical works at Conveyor yard</td> <td>In accordance with the Accepted Programme</td> </tr> <tr> <td>5</td> <td></td> <td>Completion of paving Works, stormwater drainage and cable installation as well as all related electrical works at Conveyor yard</td> <td>In accordance with the Accepted Programme</td> </tr> <tr> <td>6</td> <td></td> <td>Testing and final commissioning at Conveyor yard</td> <td>In accordance with the Accepted Programme</td> </tr> <tr> <td>7</td> <td></td> <td>Completion of construction and erection of roof shelter structures and lighting installation as well as all related electrical works at Gas Store yard</td> <td>In accordance with the Accepted Programme</td> </tr> </tbody> </table>	The <i>key dates</i> and the <i>conditions</i> to be met are:		<b>Condition to be met</b>	<b>key date</b>	1		Safety file approval	In accordance with the Accepted Programme	2		Site establishment	In accordance with the Accepted Programme	3		Investigations and design completion	30 working days after kick -off meeting	4		Completion of construction and erection of roof shelter structures and lighting installation as well as all related electrical works at Conveyor yard	In accordance with the Accepted Programme	5		Completion of paving Works, stormwater drainage and cable installation as well as all related electrical works at Conveyor yard	In accordance with the Accepted Programme	6		Testing and final commissioning at Conveyor yard	In accordance with the Accepted Programme	7		Completion of construction and erection of roof shelter structures and lighting installation as well as all related electrical works at Gas Store yard	In accordance with the Accepted Programme
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		<b>8</b>	<b>Completion of paving Works, stormwater drainage and cable installation as well as all related electrical works at Gas Store yard</b>	<b>In accordance with the Accepted Programme</b>
		<b>9</b>	<b>Testing and final commissioning at Gas Store yard</b>	<b>In accordance with the Accepted Programme</b>
		<b>10</b>	<b>Completion of construction and erection of roof shelter structures and lighting installation as well as all related electrical works at GEC yard</b>	<b>In accordance with the Accepted Programme</b>
		<b>11</b>	<b>Completion of paving Works, stormwater drainage and cable installation as well as all related electrical works at GEC yard</b>	<b>In accordance with the Accepted Programme</b>
		<b>12</b>	<b>Testing and final commissioning at GEC yard</b>	<b>In accordance with the Accepted Programme</b>

<b>30.1</b>	The <i>access dates</i> are:	<b>Part of the Site</b>	<b>Date</b>
		<b>1</b>	<b>Site establishment</b>
			<b>In accordance with the Accepted Programme</b>
		<b>2</b>	<b>Conveyor yard</b>
			<b>In accordance with the Accepted Programme</b>
		<b>3</b>	<b>Gas Store yard</b>
			<b>In accordance with the Accepted Programme</b>
		<b>4</b>	<b>GEC yard</b>
			<b>In accordance with the Accepted Programme</b>

<b>31.1</b>	The <i>Contractor</i> is to submit a first	<b>Two (2) weeks of the Contract award</b>
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	programme for acceptance within	
31.2	The <i>starting date</i> is	<b>TBC</b>
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	<b>Seven (7) calendar days</b>
35.1	The <i>Employer</i> is not willing to take over the <i>Works</i> before the Completion Date.	For sectional completion of each part of the site all commission must be completed and report submitted and accepted
<b>4.</b>	<b>Testing and Defects</b>	
42.2	The <i>defects date</i> is	<b>52 weeks after Completion of the whole of the Works for each section.</b>
43.2	The <i>defect correction period</i> is	<b>within 48 hours after notification of a Defect</b>
<b>5.</b>	<b>Payment</b>	
50.1	The <i>assessment interval</i> is	<b>The assessment interval is one (1) month, and assessments will be carried out on the 20<sup>th</sup> day of each month or on the preceding Friday if the 20<sup>th</sup> falls on a weekend.</b>
51.1	The <i>currency of this contract</i> is the	<b>South African Rand.</b>
51.2	The period within which payments are made is	<b>60 days after receipt of valid tax invoice.</b>
51.4	The <i>interest rate</i> is	<p>the publicly quoted prime rate of interest (calculated on a 365-day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and</p> <p>(ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted <i>mutatis mutandis</i> every 6 months thereafter and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.</p>
<b>6.</b>	<b>Compensation events</b>	
60.1(13)	Assumed values for the ten-year	<b>As stated in Annexure A to this Contract Data</b>

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	return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are:	<b>provided by the Employer.</b>
<b>7.</b>	<b>Title</b>	<b>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.</b>
<b>8.</b>	<b>Risks and insurance</b>	
80.1	These are additional <i>Employer's</i> risks	<b>None</b>
<b>9.</b>	<b>Termination</b>	<b>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.</b>
<b>10.</b>	<b>Data for main Option clause</b>	
<b>B</b>	<b>Priced contract with bill of quantities</b>	
60.6	The <i>method of measurement</i> is	<b>SABS/SANS 1200 and amended as stated in Part C2.1 Pricing Assumptions.</b>
<b>11.</b>	<b>Data for Option W1</b>	<b>Refer to dispute resolution procedure</b>
W1.1	The <i>Adjudicator</i> is	<b>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 <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a>). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).</b>  <b>Adjudicator will be appointed when the need arises.</b>
W1.2(3)	The <i>Adjudicator nominating body</i> is:	<b>the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ) or its successor body.</b>
W1.4(2)	The <i>tribunal</i> is:	<b>arbitration.</b>
W1.4(5)	The <i>arbitration procedure</i> is  The place where arbitration is to be held is  The person or organisation who will choose an arbitrator - if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is	<b>the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.</b>  <b>Johannesburg, South Africa</b>  <b>the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or</b>

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its successor body.

**12 Data for secondary Option clauses**

<b>X1</b>	<b>Price adjustment for inflation</b>			
X1.1(a)	The <i>base date</i> for indices is	<b>one (1) month prior to the tender closing Date.</b>		
X1.1(c)	The proportions used to calculate the Price Adjustment Factor are:	<b>proportion</b>	<b>linked to index for</b>	
		<b>0.15</b>	<b>non-adjustable</b>	
		<b>Total 1.00</b>		
		<b>NB: Prices will be fixed and firm for the 16 months from base date, thereafter the prices will be adjusted as per the agreed indices.</b>		
<b>X2</b>	<b>Changes in the law</b>	<b>There is no reference to the Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.</b>		
<b>X5</b>	<b>Sectional Completion</b>			
X5.1	The <i>completion date</i> for each <i>section</i> of the <i>Works</i> is:	<b>Section</b>	<b>Description</b>	<b>Completion date</b>
		<b>1</b>	<b>Site establishment</b>	<b>In accordance with the Accepted Programme</b>
		<b>2</b>	<b>Investigations and design completion</b>	<b>In accordance with the Accepted Programme</b>
		<b>3</b>	<b>Construction and erection of roof shelter structures, all electrical works, installation of paving and construction of drainage infrastructure at Conveyor yard</b>	<b>In accordance with the Accepted Programme</b>

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		4	Construction and erection of roof shelter structures, all electrical works installation of paving and construction of drainage infrastructure at Gas Store yard	In accordance with the Accepted Programme
		5	Construction and erection of roof shelter structures, all electrical works, installation of paving and construction of drainage infrastructure at GEC yard	In accordance with the Accepted Programme
<b>X5 &amp; X7</b>	<b>Sectional Completion and delay damages used together</b>			
X7.1 X5.1	Delay damages for late Completion of the sections of the <i>works</i> are:	<b>0.2% of the total of the Prices per day for each day that a Section is not completed by the required Completion Date, capped at 10% of the total of the Prices for the Section.</b>		
<b>X13</b>	<b>Performance bond</b>			
X13.1	The amount of the performance bond is	<b>10% of the total of the Prices.</b>		
<b>X15</b>	Limitation of the Contractor's liability for his design to reasonable skill & care	<b>There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.</b>		
<b>X16</b>	<b>Retention (not used with Option F)</b>			
X16.1	The <i>retention free amount</i> is	<b>R0.00</b>		
	The <i>retention percentage</i> is	<b>10% of the amount due in each payment assessment</b>		
<b>X18</b>	<b>Limitation of liability</b>			
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	<b>R0.0 (zero Rand)</b>		
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	<b>The amount of the deductibles relevant to the event</b>		
X18.3	The <i>Contractor's</i> liability for Defects	<b>The greater of</b>		

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	due to his design which are not listed on the Defects Certificate is limited to	<p><b>the total of the Prices at the Contract Date and</b></p> <ul style="list-style-type: none"> <li>the amounts excluded and unrecoverable from the <i>Employer's</i> assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus the applicable deductible as at contract date.</li> </ul>
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	<p><b>the total of the Prices other than for the additional excluded matters.</b></p> <p><b>The <i>Contractor's</i> total liability for the additional excluded matters is not limited.</b></p> <p><b>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for</b></p> <ul style="list-style-type: none"> <li>Defects due to his design which arise before the Defects Certificate is issued,</li> <li>Defects due to manufacture and fabrication outside the Site,</li> <li>Loss of or damage to property (other than the <i>Works, Plant and Materials</i>), death of or injury to a person</li> <li>Infringement of an intellectual property right.</li> </ul>
X18.5	The <i>end of liability date</i> is	<p><b>(i) 5 years after the <i>defects date</i> for latent Defects</b></p> <p><b>(ii) the date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter.</b></p> <p><b>A latent Defect is a Defect which would not have been discovered on reasonable inspection by the <i>Employer</i> or the <i>Supervisor</i> before the <i>defects date</i>, without requiring any inspection not ordinarily carried out by the <i>Employer</i> or the <i>Supervisor</i> during that period.</b></p> <p><b>If the <i>Employer</i> or the <i>Supervisor</i> do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the <i>Employer</i> or the <i>Supervisor</i> to have discovered the Defect.</b></p>
<b>Z</b>	<b>The <i>Additional conditions of contract</i> are</b>	<b>Z1 to Z15 always apply.</b>
<b>Z1</b>	<b>Cession delegation and assignment</b>	
	Z1.1	The <i>Contractor</i> does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the <i>Employer</i> .
	Z1.2	Notwithstanding the above, the <i>Employer</i> may on written notice to the <i>Contractor</i> cede and delegate its rights and obligations under this contract to any of its subsidiaries or any of its present divisions or operations which may be converted into separate legal entities as a result

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of the restructuring of the Electricity Supply Industry.

## **Z2 Joint ventures**

- Z2.1 If the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations then these persons or organisations are deemed to be jointly and severally liable to the *Employer* for the performance of this contract.
- Z2.2 Unless already notified to the *Employer*, the persons or organisations notify the *Project Manager* within two weeks of the Contract Date of the key person who has the authority to bind the *Contractor* on their behalf.
- Z2.3 The *Contractor* does not alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the *Employer* having been given to the *Contractor* in writing.

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

- Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor's* B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.
- Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Project Manager* within thirty days of the notification or as otherwise instructed by the *Project Manager*.
- Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor's* obligation to Provide the *Works*.
- Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are P1, P2 and P3 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

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

## **Z4 Confidentiality**

- Z4.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.
- Z4.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the Disclosing Party.
- Z4.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken, if possible, prior to any disclosure. In the event that such protective order is not,

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or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.

- Z4.4 The taking of images (whether photographs, video footage or otherwise) of the *Works* or any portion thereof, in the course of Providing the *Works* and after Completion, requires the prior written consent of the *Project Manager*. All rights in and to all such images vests exclusively in the *Employer*.
- Z4.5 The *Contractor* ensures that all his Subcontractors abide by the undertakings in this clause.

**Z5 Waiver and estoppel: Add to core clause 12.3:**

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

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

- Z6.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *Works*. Without limitation the *Contractor*:
- accepts that the *Employer* may appoint him as the “Principal *Contractor*” (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) (“the Construction Regulations”) for the Site.
  - warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of *Works*; and
  - undertakes, in and about the execution of the *Works*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor*’s direction and control, likewise observe and comply with the foregoing.
- Z6.2 The *Contractor*, in and about the execution of the *Works*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor*’s direction and control, likewise observe and comply with the foregoing.

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

- Z7.1 Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer*’s procedures stated in the *Works* Information, showing the amount due for payment equal to that stated in the payment certificate.
- Z7.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.
- Z7.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to

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comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer's* VAT number 4740101508 on each invoice he submits for payment.

## Z8 Notifying compensation events

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

## Z9 *Employer's* limitation of liability

- Z9.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)
- Z9.2 The *Contractor's* entitlement under the indemnity in 83.1 is provided for in 60.1(14) and the *Employer's* liability under the indemnity is limited.

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

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

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

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

## Z12 Ethics

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

- Affected Party** means, as the context requires, any party, irrespective of whether it is the *Contractor* or a third party, such party's employees, agents, or Subcontractors or Subcontractor's employees, or any one or more of all of these parties' relatives or friends,
- Coercive Action** means to harm or threaten to harm, directly or indirectly, an Affected Party or the property of an Affected Party, or to otherwise influence or attempt to influence an Affected Party to act unlawfully or illegally,
- Collusive Action** means where two or more parties co-operate to achieve an unlawful or illegal purpose, including to influence an Affected Party to act unlawfully or illegally,
- Committing Party** means, as the context requires, the *Contractor*, or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractor or the Subcontractor's employees,
- Corrupt Action** means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,
- Fraudulent Action** means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an obligation or incurring an obligation,
- Obstructive Action** means a Committing Party unlawfully or illegally destroying, falsifying, altering or concealing information or making false statements to materially impede an investigation into allegations of Prohibited Action, and

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

- Z12.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.
- Z12.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Contractor* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Employer* has. It is not required that the Committing Party had to have been found guilty, in court or in any other similar process, of such Prohibited Action before the *Employer* can terminate the *Contractor's* obligation to Provide the Services for this reason.
- Z12.3 If the *Employer* terminates the *Contractor's* obligation to Provide the Services for this reason, the amounts due on termination are those intended in core clauses 92.1 and 92.2.
- Z12.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Employer* does not have a contractual bond with the Committing Party, the *Contractor* ensures that the Committing Party co-operates fully with an investigation.

**Z13 Insurance**

**Z 13.1 Replace core clause 84 with the following:**

**Insurance cover 84**

- 84.1** When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.
- 84.2** The *Contractor* provides the insurances stated in the Insurance Table A.
- 84.3** The insurances provide cover for events which are at the *Contractor's* risk from the *starting date* until the earlier of Completion and the date of the termination certificate.

**INSURANCE TABLE A**

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

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

**Z 13.2**

**Replace core clause 87 with the following:**

The *Employer* provides the insurances stated in the Insurance Table B.

**INSURANCE TABLE B**

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

**Z14 Nuclear Liability**

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

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and is the holder of a nuclear licence in respect of the KNPS.

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

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

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

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

## **Z15 Asbestos**

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

<b>AAIA</b>	means approved asbestos inspection authority.
<b>ACM</b>	means asbestos containing materials.
<b>AL</b>	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.
<b>Ambient Air</b>	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.
<b>Compliance Monitoring</b>	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.
<b>OEL</b>	means occupational exposure limit.
<b>Parallel Measurements</b>	means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
<b>Safe Levels</b>	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.
<b>Standard</b>	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.
<b>SANAS</b>	means the South African National Accreditation System.
<b>TWA</b>	means the average exposure, within a given workplace, to airborne asbestos

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fibres, normalised to the baseline of a 4 hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.

- Z15.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) (“Asbestos Regulations”). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.
- Z15.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor's* expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z15.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.
- Z15.3 The *Employer* manages asbestos and ACM according to the Standard.
- Z15.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.
- Z15.5 The *Contractor's* personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.
- Z15.6 The *Contractor* continues to Provide the Services, without additional control measures presented on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.
- Z15.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos *Contractor*, instructed by the *Employer* at the *Employer's* expense, and conducted in line with South African legislation.

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

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

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

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

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## C1.2 Contract Data

### Part two - Data provided by the Contractor

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	% %
11.2(18)	The <i>working areas</i> are the Site and	
24.1	The <i>Contractor's</i> key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	
11.2(3)	The <i>completion date</i> for the whole of the <i>Works</i> is	
11.2(14)	The following matters will be included in the Risk Register	
11.2(19)	The <i>Works</i> Information for the <i>Contractor's</i> design is in:	
31.1	The programme identified in the Contract Data is	
<b>B</b>	<b>Priced contract with bill of quantities</b>	
11.2(21)	The <i>bill of quantities</i> is in	

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

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## C1.3 Forms of Securities

### Pro formas for Bonds & Guarantees

For use with the NEC3 Engineering & Construction Contract

***[Note to contract compiler:***

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

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

Option X13: Performance Bond

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

The organisation providing the bond / guarantee does so by copying the pro forma document onto his letterhead without any change to the text or format and completing the required details. The completed document is then given to the *Employer* within the time stated in the contract.

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

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

**Eskom Holdings SOC Ltd**  
**Megawatt Park**  
**Maxwell Drive**  
**Sandton**  
**Johannesburg**

Date:

Dear Sirs

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

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

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

1. In this Guarantee the following words and expressions shall have the following meanings:-
  - 1.1. "Bank" - means [●], [●] Branch, (Registration No. [●]); [Drafting Note: Name of Bank to be inserted]
  - 1.2. "Bank's Address" - means [●]; [Drafting Note: Bank's physical address to be inserted]
  - 1.3. "Contract" – means the written agreement relating to the Project, entered into between Eskom and the Contractor, on or about the [●] day of [●] 200[●] (Contract Reference No. [.]as amended, varied, restated, novated or substituted from time to time; [Drafting Note: Signature Date and Contract reference number to be inserted]
  - 1.4. "Contractor" – means [●] a company registered in accordance with the laws of [●] under Registration Number [●]. [Drafting Note: Name and details of Contractor to be inserted]
  - 1.5. "Eskom" - means Eskom Holdings SOC Ltd, a company registered in accordance with the laws of the Republic of South Africa under Registration Number 2002/015527/30].
  - 1.6. "Expiry Date" - means the date on which the Defects Certificate is issued in terms of the Contract.
  - 1.7. "Guaranteed Sum" - means the sum of R [●] ([●] Rand);
  - 1.8. "Project" - means [insert if applicable.].
2. At the instance of the Contractor, we the undersigned \_\_\_\_\_ and \_\_\_\_\_, in our respective capacities as \_\_\_\_\_ and \_\_\_\_\_ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of Eskom, as security for the proper performance by the Contractor of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to Eskom, on written demand from Eskom received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.
3. A demand for payment under this guarantee shall be made in writing at the Bank's address and shall:
  - 3.1. be signed on behalf of Eskom by a Group Executive, Divisional Executive, Senior General Manager, General Manager or its delegate;
  - 3.2. state the amount claimed ("the Demand Amount");

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- 3.3. state that the Demand Amount is payable to Eskom in the circumstances contemplated in the Contract.
- 4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank’s obligation/s to make payment:
  - 4.1. is and shall be absolute provided demand is made in terms of this bond in all circumstances; and
  - 4.2. is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.
- 5. The Bank’s obligations in terms of this Guarantee:
  - 5.1. shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
  - 5.2. shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between Eskom and the Contractor.
- 6. Eskom shall be entitled to arrange its affairs with the Contractor in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the Contractor or any variation under or to the Contract.
- 7. Should Eskom cede its rights against the Contractor to a third party where such cession is permitted under the Contract, then Eskom shall be entitled to cede to such third party the rights of Eskom under this Guarantee on written notification to the Bank of such cession.
- 8. This Guarantee:
  - 8.1. shall expire on the Expiry Date until which time it is irrevocable;
  - 8.2. is, save as provided for in 7 above, personal to Eskom and is neither negotiable nor transferable;
  - 8.3. shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
  - 8.4. shall be regarded as a liquid document for the purpose of obtaining a court order; and
  - 8.5. shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa.
  - 8.6. Any claim which arises or demand for payment received after expiry date will be invalid and unenforceable.
- 9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank’s Address.

Signed at \_\_\_\_\_ Date \_\_\_\_\_

For and behalf of the Bank

Bank Signatory: \_\_\_\_\_ Bank Signatory: \_\_\_\_\_

Witness: \_\_\_\_\_ Witness: \_\_\_\_\_  
 Bank’s seal or stamp

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## **PART 2: PRICING DATA**

### **ECC3 Option B**

<b>Document reference</b>	<b>Title</b>	<b>No of pages</b>
C2.1	Pricing assumptions: Option B	3
C2.2	The <i>bill of quantities</i>	7

## C2.1 Pricing assumptions: Option B

### How work is priced and assessed for payment

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

<b>Identified and defined terms</b>	11 11.2	<p>(21) The Bill of Quantities is the <i>bill of quantities</i> as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.</p> <p>(28) The Price for Work Done to Date is the total of</p> <ul style="list-style-type: none"> <li>• the quantity of the work which the <i>Contractor</i> has completed for each item in the Bill of Quantities multiplied by the rate and</li> <li>• a proportion of each lump sum which is the proportion of the work covered by the item which the <i>Contractor</i> has completed.</li> </ul> <p>Completed work is work without Defects which would either delay or be covered by immediately following work.</p> <p>(31) The Prices are the lump sums and the amounts obtained by multiplying the rates by the quantities for the items in the Bill of Quantities.</p>
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This confirms that Option B is a re-measurement contract and the bill comprises only items measured using quantities and rates or stated as lump sums. Value related items are not used. Time related items are items measured using rates where the rate is a unit of time.

### Function of the Bill of Quantities

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

### Guidance before pricing and measuring

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

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

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

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## Measurement and payment

### Symbols

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

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

### 1.1. General assumptions

- 1.1.1. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.
- 1.1.2. The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the *Contractor* in carrying out or providing that item.
- 1.1.3. An item against which no Price is entered will be treated as covered by other Prices or rates in the *bill of quantities*.
- 1.1.4. The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. The quantities of work assessed and certified for payment by the *Project Manager* at each assessment date will be used for determining payments due.
- 1.1.5. The short descriptions of the items of payment given in the *bill of quantities* are only for the purposes of identifying the items. Detail regarding the extent of the work entailed under each item is provided in the *Works Information*.

### 1.2. Departures from the *method of measurement*

- 1.2.1.

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### **1.3. Amplification of or assumptions about measurement items**

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

#### 1.3.1.

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## C2.2 the *bill of quantities*

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

The BOQ is as follows and to be filled taking into consideration the scope of work which has the unique identifier 15ENG GEN-2299 which forms part of this contract.

TUTUKA POWER STATION						
C.GTU1106						
PAVEMENT AND DRAINAGE AT THE STORAGE FACILITIES AT TUTUKA POWER STATION						
ESTIMATE – SECTION FOR PAVEMENT AND DRAINAGE						
ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	SANS 1200 A	<b>SECTION 1: GENERAL</b>				
	8.3	<b>SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS</b>				
	8.3.2	<b>Establishment of Facilities on the Site:</b>				
	8.3.2.2	<b>Facilities for Contractor</b>				
1.01	8.3.2.2	(a) Offices and storage sheds (tools room, lockable and protected)	Sum	1		
1.02	8.3.2.2	(b) Workshops (materials storage yard)	Sum	1		
1.03	8.3.2.2	(c) Laboratories	Sum	1		
1.04	8.3.2.2	(d) Living accommodation.	Sum	1		
1.05	8.3.2.2	(e) Ablution and latrine facilities.	Sum	1		
1.06	8.3.2.2	(f) Tools and equipment.	Sum	1		
1.07	8.3.2.2	(g) Water supplies, electric power, communications,	Sum	1		
1.08	8.3.2.2	(h) Dealing with water	Sum	1		
1.09		(i) Access	Sum	1		
1.1	8.3.2.2	(j) Plant.	Sum	1		

DESIGNING, AND CONSTRUCTION OF INTERLOCKING PAVING BLOCKS, STORM WATER DRAINAGE SYSTEMS AND ROOF SHELTERS FOR THREE STORAGE YARDS (GEC YARD, GAS STORE AND BOILER TUBE/CONVEYOR YARD).

1.11	8.3.4	Removal of Site establishment	Sum	1		
1.12	PSA 8.3.3.2	<b>OHS Act Obligations:</b>				
		i) General Safety obligations (incl. provision of personal protective equipment, medicals and induction).	Sum	1		
1.13		ii) Health and Safety plan/file including health and safety training.	Sum	1		
1.14	8.3.5.3	Environmental Management Plan Obligations	Sum	1		
	<b>8.4</b>	<b>SCHEDULED TIME-RELATED ITEMS</b>				
1.15	8.4.2.2	Facilities for <i>Contractor</i>				
1.16	8.4.2.2.a)	Offices and storage sheds	Month	18		
1.17	8.4.2.2.b)	<i>Workshops</i>	Month	18		
1.18	8.4.2.2.c)	Laboratories	Month	18		
1.19	8.4.2.2.d)	Living accommodation	Month	18		
1.20	8.4.2.2.e)	Ablution and latrine facilities	Month	18		
1.21	8.4.3	Supervision for duration of construction	Month	18		
1.22	8.4.3	Safety Officer	Month	18		
1.23		Site Manager	Month	18		
1.24		Quality Officer	Month	18		
1.25	8.4.4	Company and head office overhead costs for duration of the contract	Month	18		
1.26	-	Professional Registered Civil Engineer	Month	18		
1.27	-	Professional Registered Electrical Engineer	Month	18		
1.28	-	Staff Transport to site	Month	18		

DESIGNING, AND CONSTRUCTION OF INTERLOCKING PAVING BLOCKS, STORM WATER DRAINAGE SYSTEMS AND ROOF SHELTERS FOR THREE STORAGE YARDS (GEC YARD, GAS STORE AND BOILER TUBE/CONVEYOR YARD).

TOTAL						
ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY		AMOUNT
2		<b>SECTION 2: DESIGNS</b>				
<b>2.1 DESIGNS</b>						
2.1.1		Paving and Drainage, Shelter & Electrical Designs (including review and approvals by Professional Engineer) for all construction sites.	Sum	1		
2.1.2		As built Drawings	Sum	1		
<b>TOTAL</b>						
<b>TOTAL SECTION 1</b>						
ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3		<b>SECTION 2: CONSTRUCTION WORKS</b>				
<b>3.1 GAS STORE</b>						
3.1.1		<b>Earth Works</b> Relocation of existing materials to a designated location selected by Eskom	Sum	1		
3.1.2		Removal of existing kerbs	m	92		
3.1.3		Clear site of vegetation	m <sup>2</sup>	4640		
3.1.4		Remove topsoil to a nominal depth of 300 mm	m <sup>3</sup>	1392		
3.1.5		Carting away of excavated/spoil material and rubble to designated dumping site	m <sup>3</sup> .km	3480		
3.1.6		Compaction at 93% Mod AASHTO of ground surfaces and scarifying for a depth of 150mm to including, breakdown of oversize material, Importing of G5 at 150mm compacted at 95% MOD AASHTO	m <sup>3</sup>	696		

DESIGNING, AND CONSTRUCTION OF INTERLOCKING PAVING BLOCKS, STORM WATER DRAINAGE SYSTEMS AND ROOF SHELTERS FOR THREE STORAGE YARDS (GEC YARD, GAS STORE AND BOILER TUBE/CONVEYOR YARD).

3.1.7		C4 Stabilised layer at 150mm to a MOD ASSHTO 95%	m <sup>3</sup>	696		
3.1.8		Bedding sand compacted to 20mm thickness	m <sup>2</sup>	4640		
3.1.9		Laying of paving (Block type S-A, Block class 35MPa) New blocks	m <sup>2</sup>	4640		
3.1.10		Edge restraint installation	m	300		
		<b>Drainage</b>				
3.1.11		a) Cleaning of existing drainage system	m	70		
		<b>Existing channel for 25m</b>				
3.1.12		a) Supply and Install 25m x 0.42m hot-dip galvanised steel grating	m <sup>2</sup>	10.5		
<b>TOTAL GAS STORE YARD</b>						
<b>3.2 GEC YARD</b>						
		<b>Earth Works</b>				
3.2.1		Removal of existing steels poles and unnecessary material	Sum	1		
3.2.2		Clear site of vegetation during surface preparation	m <sup>2</sup>	10800		
3.2.3		Remove topsoil to a nominal depth of 300mm	m <sup>3</sup>	3240		
3.2.4		Carting away of excavated/spoil material and rubble to designated dumping site	m <sup>3</sup> .km	16200		
3.2.5		Compaction at 93% Mod AASHTO of ground surfaces and scarifying for a depth of 150mm to including, breakdown of oversize material, Importing of G5 at 150mm compacted at 95% MOD AASHTO	m <sup>3</sup>	1620		
3.2.6		C4 Stabilised layer at 150mm to a MOD ASSHTO 95%	m <sup>3</sup>	1620		
3.2.7		Bedding sand compacted to 20mm thickness	m <sup>3</sup>	216		
3.2.8		Laying of paving (Block type	m <sup>2</sup>	10800		

DESIGNING, AND CONSTRUCTION OF INTERLOCKING PAVING BLOCKS, STORM WATER DRAINAGE SYSTEMS AND ROOF SHELTERS FOR THREE STORAGE YARDS (GEC YARD, GAS STORE AND BOILER TUBE/CONVEYOR YARD).

		S-A, Block class 35MPa) New blocks				
3.2.9		Edge restraint installation	m	498.8		
		<b>V-drain Drainage Channel at bottom perimeter of fence</b>				
3.2.10		a) Excavation at 150mm	m <sup>3</sup>	11.52		
3.2.11		b) Installation of G5 at 150mm	m <sup>3</sup>	11.52		
3.2.12		c) Geotextile membrane	m <sup>2</sup>	237.44		
3.2.13		d) Mesh wire ref 888	m <sup>2</sup>	76.8		
3.2.14		e) 20Mpa Concrete at 85mm thick	m <sup>3</sup>	6.53		
3.2.15		f) Formwork	m <sup>2</sup>	8.16		
<b>TOTAL GEC YARD</b>						
<b>3.3 BOILER TUBE/CONVEYOR YARD</b>						
3.3.1		Removal and relocation of existing waste material	Sum	1		
3.3.2		Cut out existing asphalt @60mm thickness	m <sup>3</sup>	217.2		
3.3.3		Repair of concrete slab at entrance gate @200mm thickness	m <sup>3</sup>	52.4		
3.3.4		Clear site of vegetation during surface preparation	m <sup>2</sup>	11589.81		
3.3.5		Remove topsoil to a nominal depth of 300mm	m <sup>3</sup>	3476.9		
3.3.6		Carting away of excavated/spoil material and rubble to designated dumping site	m <sup>3</sup> .km	17384.715		
3.3.7		Compaction at 93% Mod AASHTO of ground surfaces and scarifying for a depth of 150mm to including, breakdown of oversize material, Importing of G5 at 150mm compacted at 95% MOD AASHTO	m <sup>3</sup>	1738.47		
3.3.8		C4 Stabilised layer at 150mm to a MOD ASSHTO 95%	m <sup>3</sup>	1738.47		

DESIGNING, AND CONSTRUCTION OF INTERLOCKING PAVING BLOCKS, STORM WATER DRAINAGE SYSTEMS AND ROOF SHELTERS FOR THREE STORAGE YARDS (GEC YARD, GAS STORE AND BOILER TUBE/CONVEYOR YARD).

3.3.9		Bedding sand compacted to 20mm thickness	m <sup>2</sup>	231.7962		
3.3.10		Laying of paving (Block type S-A, Block class 35MPa) New blocks at a slope of between 1.5% and 2%	m <sup>2</sup>	11 589.81		
3.3.11		Edge restraint installation	m	1069.24		
		<b>V-drain Drainage Channel at bottom perimeter of fence</b>				
3.3.12		a) Excavation at 150mm	m <sup>3</sup>	4.2		
3.3.13		b) Installation of G5 at 150mm	m <sup>3</sup>	4.2		
3.3.14		c) Geotextile membrane	m <sup>2</sup>	28		
3.3.15		d) Mesh wire ref 888	m <sup>2</sup>	28		
3.3.16		e) 20Mpa Concrete at 85mm thick	m <sup>3</sup>	2.38		
3.3.17		f) Formwork	m <sup>2</sup>	2.98		
<b>TOTAL BOILER TUBE/CONVEYOR YARD</b>						
<b>GRAND TOTAL</b>						

<b>TUTUKA POWER STATION</b>						
<b>C.GTU1106</b>						
<b>PAVEMENT AND DRAINAGE AT THE STORAGE FACILITIES AT TUTUKA POWER STATION</b>						
<b>ESTIMATE – SECTION FOR PORTAL FRAME SHELTER</b>						
ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3		<b>SECTION 1: CONSTRUCTION WORKS</b>				
		<b>CIVIL WORKS</b>				
<b>3.1 GAS STORE</b>						
		<b>Shelter</b>				
3.1.1		Supply of Steel structure 20x12x6.5m	Sum	2		
3.1.2		IBR chromadek 0.50mm Roof sheeting (Precolored)	m <sup>2</sup>	240		
3.1.3		Supply and install cladding [2] x12m sides & [1]x 20m gable ends with IBR chromadek 0.50mm Roof sheeting (Precolored)	m <sup>2</sup>	154		
3.1.4		Base plate 15mm thick	No	6		
3.1.5		Erection	sum	1		
3.1.6		Transportation	sum	1		
3.1.7		Lifting	sum	1		
3.1.8		Anti corrosive primer	m <sup>2</sup>	394		
3.1.9		Pergalvanizing Purlins		1		

DESIGNING, AND CONSTRUCTION OF INTERLOCKING PAVING BLOCKS, STORM WATER DRAINAGE SYSTEMS AND ROOF SHELTERS FOR THREE STORAGE YARDS (GEC YARD, GAS STORE AND BOILER TUBE/CONVEYOR YARD).

3.1.10		Excavation box cut out (1500x1500x500) mm	Sum			
			m <sup>3</sup>	6.75		
3.1.11		Carting away of excavated/spoil material and rubble to designated dumping site				
			m <sup>3</sup> .km	27		
3.1.12		Blinding layer 50mm				
			m <sup>3</sup>	0.68		
3.1.13		[6] Ref 888 Wire Mesh (Top & Bottom) at 4.5m <sup>2</sup>				
			m <sup>2</sup>	27		
3.1.14		[6] Concrete Footing 1500x1500x500mm, 35Mpa				
			m <sup>3</sup>	6.75		
3.1.15		Formwork				
			m <sup>2</sup>	18		
3.1.16		Making and testing 150 x 150 x 150mm concrete strength test cubes				
			no	1		
<b>TOTAL GAS STORE YARD</b>						
<b>3.2 GEC YARD</b>						
<b>Shelter</b>						
3.2.1		Supply of Steel structure (40x30x6.5) m, 1200m <sup>2</sup>	No	5		
3.2.2		IBR chromadek 0.50mm Roof sheeting	m <sup>2</sup>	6000		
3.2.3		Supply and install cladding [2] x30m sides & [1]x 40m gable ends with IBR chromadek 0.50mm Roof sheeting	m <sup>2</sup>	1750		
3.2.4		Base plate 15mm thick	No	50		
3.2.5		Erection	sum	1		
3.2.6		Transportation	sum	1		
3.2.7		Lifting	sum	1		
3.2.8		Anti corrosive primer	m <sup>2</sup>	7750		
3.2.9		Pregalvanizing Purlins	Sum	1		
3.2.10		Excavation box cut out (1500x1500x500) mm	m <sup>3</sup>	56.3		
3.2.11		Carting away of excavated/spoil material and rubble to designated dumping site	m <sup>3</sup> .km	225.2		
3.2.12		Blinding layer 50mm	m <sup>3</sup>	1.13		
3.2.13		[6] Ref 888 Wire Mesh (Top & Bottom) at 4.5m <sup>2</sup>	m <sup>2</sup>	225		
3.2.14		[6] Concrete Footing 1500x1500x500mm, 35Mpa	m <sup>3</sup>	56.3		
3.2.15		Formwork	m <sup>2</sup>	150		
3.2.16		Making and testing 150 x 150 x 150mm concrete strength test cubes	no	1		
<b>TOTAL GEC YARD</b>						
<b>3.3 BOILER TUBE/CONVEYOR YARD</b>						
<b>Shelter</b>						
3.3.1		Supply of Steel structure (30x60x6.5) m	No	1		
3.3.2		IBR chromadek 0.50mm Roof	m <sup>2</sup>	1800		

DESIGNING, AND CONSTRUCTION OF INTERLOCKING PAVING BLOCKS, STORM WATER DRAINAGE SYSTEMS AND ROOF SHELTERS FOR THREE STORAGE YARDS (GEC YARD, GAS STORE AND BOILER TUBE/CONVEYOR YARD).

3.3.3	sheeting Supply and install cladding [2] x30m sides & [1]x 60m gable ends with IBR chromadek 0.50mm Roof sheeting	m <sup>2</sup>	420		
3.3.4	Base plate 15mm thick	No	6		
3.3.5	Erection	sum	1		
3.3.6	Transportation	sum	1		
3.1.7	Lifting	sum	1		
3.1.8	Anti corrosive primer	m <sup>2</sup>	2220		
3.1.9	Pregalvanizing Purlins	Sum	1		
3.3.10	Excavation box cut out (1500x1500x500) mm	m <sup>3</sup>	16		
3.3.11	Carting away of excavated/spoil material and rubble to designated dumping site	m <sup>3</sup> .km	64		
3.3.12	Blinding layer 50mm	m <sup>3</sup>	1.6		
3.3.13	[14] Ref 888 Wire Mesh at 2.25 m <sup>2</sup>	m <sup>2</sup>	31.5		
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### C3.1: *Employer's Works* Information

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## C3.1 *Employer's Works* information

### 1 Description of the *Works*

#### 1.1 Executive overview

Tutuka Power Station currently consists of 3 different storage yards. These yards are all located at different areas within the station and store various items and materials respectively. Due to the lack of maintenance and poor storage practice these accelerate the deterioration of material. Such as the rusting of material which was not stored in the appropriate conditions this leads to an increase in wastage and the need as stipulated in *Works* Information for Tutuka Power Station Pavement, Shelter and drainage at the Storage Facilities 15ENG GEN-2299.

#### 1.2 Employer's objectives and purpose of the *Works*

The objectives and purpose of the *Works* is to:

- Enable Tutuka Power Station to implement the barcoding and Radio Frequency-Identification (RFID) project

#### 1.3 Interpretation and terminology

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

##### 1.3.1. List of Definitions

Item	Description
Employer	The person named as the Employer in the Appendix to Tender and the legal successors in title to this person.
<i>Contractor</i>	The person(s) named as <i>Contractor</i> in the Letter of Tender accepted by the <i>Employer</i> and the legal successors in title to this person(s).
<i>Project Manager</i>	The person appointed by the <i>Employer</i> to act as the <i>Project Manager</i> for the purposes of the Contract and named in the Appendix to Tender, or other person appointed from time to time by the <i>Employer</i> and notified to the <i>Contractor</i> as per NEC procedures.
NEC	New Engineering Contract.
<i>Works</i> Information	The document/s forming part of the contract in which are described the methods of executing the various items of work to be done, and the nature and quality of the materials to be supplied and includes technical schedules and drawings attached thereto as well as all samples and patterns.

##### 1.3.2. List of Abbreviations

Abbreviation	Description
B-BBEE	Broad Based Black Economic Empowerment
BPLwD	Black People Living with Disability
BWO	Black Woman Owned
BYO	Black Youth Owned
MS	Microsoft
NCR	Non-Conformance Report
NEC	New Engineering Contract
NEMA	National Environmental Management Act

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PPE	Personal Protective Equipment
QA	Quality Assurance
QC	Quality Control
QCP	Quality Control Plan
QM	Quality Management
QMS	Quality Management System
RFID	Radio Frequency-Identification
SANS	South African National Standards
SAT	Site Acceptance Test
SBE	Small Black Enterprises
SD&L	Supplier Development and Localization
SHE	Safety, Health and Environment
SOC	State Owned Company

## 2. Management and start up

### 2.1. Management meetings

Meetings will be held monthly between the *Project Manager* and the *Contractor* (and any other co-opted members). The *Contractor* is represented at each meeting by the appropriate members of the staff. The venue for these meetings is as determined by the *Project Manager*. The *Project Manager* writes the minutes of meetings.

Any action of the *Project Manager*, *Supervisor*, *Contractor* and Adjudicator implied in the minutes of meetings with contractual implications is confirmed by a separate communication given in accordance with this *Works Information* and NEC

The *Contractor* reports the overall progress and as a minimum requirement, the following is addressed:

- a) *Contractor's* current activity progress and planned finish dates;
- b) *Contractors* to report on all items listed in the NEC core clause, 31.
- c) *Contractor's* and *Project Manager's* programme agenda compared for delays and milestone targets
- d) Current and projected manpower by class;
- e) Health, Safety and Quality Management.
- f) The progress of any other relevant activities;
- g) To discuss any technical or commercial issues;
- h) Skills Development and Localisation
- i) CSI and Infrastructure Project Implementation Plan
- j) Procurement progress
- k) Problem areas or concerns.

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

**Table 1: Meetings Schedule**

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

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Safety Meetings	Weekly	Venue determined by the <i>Project Manager</i>	<i>Employer, Contractor, Supervisor, Safety Officers and Others as determined by the Project Manager</i>
Payment Assessment Meeting	Monthly – 20th of every month	Venue determined by the <i>Project Manager</i>	<i>Employer, Contractor, Supervisor, Quantity Supervisors and Others as determined by the Project Manager</i>
Early Warning Meeting	As and when required	Virtual Meeting/Project Boardroom	<i>Employer, Contractor, Supervisor, and Others as determined by the Project Manager</i>
Quality and Engineering Meeting	Monthly or as determined by <i>Project Manager</i>	Venue determined by the <i>Project Manager</i>	<i>Employer, Contractor, Supervisor Safety Officers and Others as determined by the Project Manager</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 MS team recording and transcript 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.

## 2.2. Documentation control

### 2.2.1. Documentation Management

#### 2.2.1.1. Document identification

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

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

#### 2.2.1.2. Documents Submission

All documents and records must be submitted according to Technical Document and Record Management Work Instruction (240-76992014) and Gx Projects Documentation Deliverable Requirements Specification (240-65459834) and the *Employer* ensures that the *Contractor* is provided with latest revisions of all these documents. In order to portray a consistent image, it is important that all documents used within the project follow the same standards of layout, style and formatting as described in the documents above. The *Contractor* is required to submit documents as electronic in pdf format in a CD and hard copies and must be delivered to the *Project Manager* with a transmittal note.

The *Contractor* submits the Master Document List to the *Employer* on a monthly basis for tracking purposes irrespective of whether there are updates or not. The MDL includes list of drawings and documents and contains the following minimum information for each document:

- Date of submission

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- Transmittal number
- Transmittal title
- Document description
- Document number
- Document Type
- Revision number
- Document Approval Status
- Document Authorisation Status (i.e. Accepted With Comments, Not Accepted with Comments, Accepted)

### 2.2.1.3. Documentation Review and Turn-around

The *Employer* has a minimum 14 calendar days to review and consolidate review comments for documentation submitted by the *Contractor*. This is specifically dealing with the *Contractor's* designs and any other proposals made by the *Contractor*.

### 2.2.2. Drawings Format and Layout

Drawings Done by Third Party Contractors for Tutuka Power Station shall comply with the following points:

- All drawings submitted to Eskom shall comply with Eskom Standard drawing applications version, at that specific time.
- All drawings are created electronically and 100% compatible with Micro station V8 software in a DGN file format.
- All drawings must be issued to Eskom in both native CADD,.dgn format and PDF/TIF format.
- PDF/TIF files must be created using the native CADD program
- Drawings issued to Eskom may not be "Write Protected" or encrypted as Eskom must do the necessary configuration management on these documents upon receipt.
- Project managers to send request for new drawing numbers to D&S Doc Controller with a list of drawings.
- List of Superseded/cancelled Drawings must be submitted with preliminary drawings that will Replace them to drawings Office before commencement of construction.
- All discrepancies or queries must be clearly marked up utilizing the following colour code system, and reviewed with the responsible draftsperson:
  - Red - Corrections or Add info
  - Yellow - Delete
  - Blue - Comments (will not be drafted)
  - Green - Correct
- All marked up Redline and Blueline drawings should be signed and dated by Registered Engineer as per ECSA.
- The contractor shall update drawing Title Block as per Contractor Title Block and Description detail for Title Block as per Engineering Drawing Standard 240-86973501 latest revision.
- In conjunction with the electronic DGN copies the contractor also provides a merged set of \*.pdf electronic copies upon first issue and each time drawing updates are required on a Hard drive or USB Flash drive.
- After commissioning the contractor supplies a set of hardcopy drawings within a file and in A3 format with electronic \*PDF and DGN copies.
- All drawings are signed by ECSA Registered Pr Eng. and the revisions noted as per employer's specifications.
- The electronic \*PDF files are provided in A3 size and conform to the requirements of The Engineering Drawing Standard 240-86973501.
- All drawings are submitted to the Project Manager for his/her acceptance.

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

### 2.2.3. Configuration change control

Any changes to the design baselines will be formally managed according to the Eskom Project Engineering Change Procedure (240-53114026). All design reviews will be conducted according to the Design Review Procedure (240-53113685).

## 2.3. Health and safety risk management

### 2.3.1. General

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

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

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

The *Contractor* ensures compliance with, amongst others:

- a) The provisions of the Occupational Health and Safety Act, No. 85 of 1993 and all applicable regulations (as amended), binding in terms thereof;
- b) The latest versions of standards, procedures, specifications, rules, systems of work and requirements of the *Employer*, copies of which will be provided to the *Contractor* on request. Refer to Section 6.
- c) The Tutuka Power Station *OHS Specification for Paving, Roof Shelter and Drainage of Stores Yards*
- d) The SHE Requirements Procedure (32–726).
- e) The provisions of the National Environmental Management Act (as amended) and all regulations in force from time to time in terms of that Act, including Environmental Authorizations, Integrated Waste Licence (Licence Number 12/9/11/L456/6/R1), Tutuka Power Station Waste Management Procedure (14RISK ENV-013), Integrated Water Use Licence (Licence Number 08/C11K/ABCFGI/1016).

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

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

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

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

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

### 2.3.2. Mandatory Agreements

The *Contractor* confirms that:

- a) In terms of sections 37(1) and 37(2) of the OHSA, the *Employer* is relieved of any and all of its responsibilities and liabilities pertaining to the activities performed by the *Contractor* (and its employees, agents, Subcontractors and mandatories) relating to the *Works*; the use of plant, materials and equipment; and whilst at the Site for whatsoever reason.
- b) The *Contractor* confirms that, in terms of the Construction Regulations, regulation 6, it is hereby mandated as the designer and must perform all duties required of a designer. (This will be applicable only where the *Contractor* is required to do design work as part of their Scope).

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

In addition, the *Contractor* shall ensure that:

- c) Prior to the *Contractor* commencing with any operations/ activities relating to the *Works* and/or prior to gaining access to the Site, the *Contractor* concludes a written mandatory agreement with the *Employer* in terms of section 37(2) of the OHSA and 5(1)(k) under the construction regulations. The aforementioned agreement constitutes a record of the written arrangements and procedures between the *Contractor* and *Employer* regarding health and safety.
- d) As far as is reasonably practicable, the safety and absence of risks to health in connection with the production, processing, use, handling, storage or transport of articles or substances is maintained;
- e) As far as is reasonably practicable, all hazards pertaining to the health and safety of persons and harm to the environment that are attached to any work which is performed, any article or substance which is produced, processed, used, handled, stored or transported and any plant or machinery which is used in its business, is clearly identified and, as far as is reasonably practicable, further establishes what precautionary measures should be taken with respect to such work, article, substance, plant or machinery in order to protect the health and safety of persons and or harm to the environment, and provides the necessary means to apply such precautionary measures;
- f) Such information, instructions, training and supervision as may be necessary to ensure, as far as is reasonably practicable, the health and safety at work of its employees, agents, Subcontractors and mandatories is provided;

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- g) As far as is reasonably practicable, no employee, agent, Subcontractor and mandatory performs any work or produces, processes, uses, handles, stores or transports any article or substance or operates any plant or machinery, unless the precautionary measures contemplated in paragraph 2.3.3, or any other precautionary measures which may be prescribed have been taken;
- h) Such measures as may be necessary in the interest of health and safety and the environment are enforced;
- i) Work is performed and that plant, materials or equipment is used under the direct supervision of a person trained to understand the hazards associated with it and who has the authority to ensure that precautionary measures required by the *Employer* are implemented; and
- j) All employees are informed of the scope of their authority as contemplated in Occupational Health and Safety Act, No. 85 of 1993.

### 2.3.3. Health and Safety Obligations

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

- a) Ensures that all statutory appointments (as required in terms of the Occupational Health and Safety Act, No. 85 of 1993 and all applicable regulations binding in terms thereof, as amended) and other appointments required in terms of the SHE Requirements Procedure (32-726) are in place and that all appointees are cognisant of their duties and responsibilities in terms of such appointments;
- b) Ensures that such appointees execute their duties and responsibilities as required by such an appointment.
- c) Ensures that all personnel brought by itself onto site (including employees of *Contractors* and Subcontractors) are suitably qualified and trained for the performance of the task, duties and functions, which will be allocated to them;
- d) Immediately reports any occupational or other injuries, near miss events, property damage, environmental related incidents as well as any potential threat to the health and safety of individuals at the *Works* or on the site, as soon as he becomes aware thereof, to the *Project Manager*;
- e) Complies with the *Employer's* Environmental, Occupational Health & Safety Incident Management Procedure - 32-95, relating to the reporting and investigation of incidents. The classification of incidents contained in such document are considered final and must be applied by the *Contractor* relating to any incidents/ injuries relating to its employees, agents, *Contractors*, Subcontractors and mandatories whilst on Site;
- f) Conducts a risk assessment regarding the utilisation of PPE and thereafter ensure that PPE of good quality is issued (at its own cost) to its employees, agents, *Contractors*, Subcontractors and mandatories prior to such individuals accessing the site, alternatively performing activities related to the *Works* at the site, as specified in the Eskom PPE Specification - 240-44175132

### 2.3.4. Fire Protection

The *Contractor* ensures that adequate firefighting apparatus is provided at all his work sites, and that his staff and sub-Contractors are trained in the use of this apparatus.

Precautions are taken to prevent any occurrence of fires or explosions while carrying out any work near flammable gas and liquid systems.

Any tampering with the *Employer's* Fire Equipment is strictly forbidden. All exit doors, fire escape routes, walkways, stairways and stair landings are kept free of obstruction, and not be used for work or storage at any time. Firefighting equipment remains accessible at all times.

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### **2.3.5. First aid**

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

### **2.3.6. Housekeeping**

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

### **2.3.7. Barricading**

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

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

### **2.3.8. Radiographic Examinations**

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

## **2.4. Environmental constraints and management**

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

The *Contractor* conforms to all requirements dictated in the permits and licences for Tutuka Power Station Integrated Waste Licence (Licence Number 12/9/11/L456/6/R1), Tutuka Power Station Waste Management Procedure (14RISK ENV-013), Integrated Water Use Licence (Licence Number 08/C11K/ABCFG1/1016). The contractor also conforms to all applicable environmental legislation including but not limited to National Environmental Management Act (NEMA, Act No. 107 of 1998) and the National Environmental Management Waste Act (NEMWA, Act No. 59 of 2008). This is achieved by undertaking inspections, audits, monitoring and reviews, conducted internally by the *Contractor* and externally by the *Project Manager*.

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

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

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

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

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

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

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

The *Employer* will provide a copy of the environmental authorisations, Water use licence and Environmental Management Plan to the *Contractor*.

#### **2.4.1. Waste Management**

All waste management activities, which includes procurement of control measures, handling and disposal or processing of all waste forms generated on the *Contractor's* site, are conducted according to Tutuka Power Station Waste Management Procedure (14RISK ENV-013), and all requirements of the *Employer* as per the Environmental Management Programme licences and permits. All costs associated with waste management are the responsibility of the *Contractor*.

All hazardous chemicals will be stored in a sealed and covered skip placed on an impermeable concrete slab.

#### **2.4.2. Spill and Incident Management**

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

#### **2.4.3. Dust and Storm-water Management**

The *Contractor* implements dust control measures for the project. The *Contractor* ensures that no ponding of storm water occurs on the site and shall establish good storm-water management in accordance with the

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*Employer's* requirements as per Environmental Management Programme and storm water management plan for Paving, Roof shelter and Drainage of stores yards project.

#### 2.4.4. Environmental Rehabilitation

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

#### 2.4.5. Alien Vegetation Control

The *Contractor* controls alien invasive plants and noxious weeds. The *Contractor* shall compile and submit to the *Employer* Alien vegetation management plan for acceptance, the procedure shall align with Alien Invasive Species Control Plan for Tutuka Power Station (14RISK ENV-0285) plan and shall take into consideration conditions of the project permits and licences all control of alien plants and noxious weeds costs are the responsibility of the *Contractor*.

### 2.5. Quality assurance requirements

#### 2.5.1. General

The *Contractor* complies with the *Employer's* Quality Requirements Standards.

- a) The *Contractor* and all Subcontractors comply with the *Employer's* quality requirements including those listed in the *Employers* specification document, (240-105658000)
- b) Certified to ISO 9001 is a mandatory requirement for this contract. The *Contractor* uses the QMS for all phases of the Project. The *Contractor* provides evidence of a fully implemented QMS within its own organisation. The *Employer* may, at his sole discretion, carry out an audit on the *Contractor* or Subcontractor's QMS for acceptance.

#### 2.5.2. Quality Management Documents Requirements

The *Supplier* will work according to the *Purchaser's* standards, specifications, tender returnables -Category 2, guidelines and procedures. Where no standards, specifications, guidelines, and procedures are available, the *Supplier* will work according to the Generation Quality manual and professional guidelines.

- The *Contractor* will fully conform to the requirement of the Supplier Quality Requirement Specification (QM-58), standards, procedures, Eskom policies and etc and ISO 9001:2015.
- A detailed safety file to be compiled, submitted and signed off by all relevant parties before any work can commence.
- All activities that need to have Quality control plans (QCP's) must be in place which will be developed by the contractor and must be approved by Eskom Engineer prior execution of work. The QCPs and ITPs must include those for sub-contractor work.
- One of the earliest/first activities on the QCP/ITP shall be "Approval of the QCP/ITP" and this is a hold point hence if it is not signed by the Employer then work cannot continue.
- The service provider might be subjected to audits, reviews and during the execution of work the client must perform inspections and spot- checks as part of monitoring
- All documents that will be arising from this project must remain with the client
- Where applicable and necessary the service provider must conform to any statutory requirements
- All documented information as per **Category 2**, to be submitted prior to work execution for purpose of evaluations (Section A, B, C, D & E) as part of the tender returnable.

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- The *Contractor* shall ensure that a Quality Management System is setup and fully maintained during the entire duration of the contract. The *Contractor* shall submit a copy of the latest ISO 9001 certificate or certificate applicable. The QMS shall comply with the latest ISO 9001 standard, or any applicable certificate of quality management system (latest applicable revision) and the *Contractor* shall comply with the requirements of 240-105658000 "Supplier Quality Management: Specification QM-58". Compliance to **Category 2** requirements is mandatory.
- Where the principal service provider will be sub-contracting, the principal service provider must provide the documented information on how to control the sub-contracted service provider
- The quality assurance requirements must also be imposed on sub-*Contractors* and suppliers of material.
- The *Contractor* utilizes their own quality documentation forms for requesting access, erection checks, etc. These request forms must be submitted to the *Employers* at least one week prior to the requested activity, or as agreed to by the Project Manager.
- The *Contractor* shall also be accountable for Quality of their work. An example of this is that the *Contractor* has its own Quality Controllers performing formal inspections/intervention according to the Quality Control Plans. Eskom QA and QC to assist.
- The *Contractor* shall submit a detailed contract organogram of personnel to be used in the Contract.
- The services must comply with the agreed specifications and the applicable directives set out in the agreement. Defects notified by The *Employer* shall be remedied by the *Contractor* upon demand by Eskom without undue delay and at no extra cost. The *Contractor* shall continuously monitor and identify non-conformances, relating to the Works Information, as signals of opportunities for improvement making process and other relevant changes to prevent recurrence.
- When NCRs and Defects notifications are issued, the *Contractor* shall acknowledge receipt within (5) working days and include the Root cause(s), Correction(s) and Corrective action(s) and proposed implementation dates to the *Employer* as per the contract response period.
- In the event of poor quality, re-work or incidents where products inspected by the Employer fail to meet requirements, the *Contractor* shall receive a Non-conformance (NCR) if deemed so by the *Employer*. The *Contractor* shall be liable for the *Employers* costs of re-inspection as well as be liable to pay penalties as specified in this contract.
- Nothing contained in the Contract shall relieve in any way the *Contractor* from the obligation of Quality control thereof.

The *Employer* reserves the right to assess and measure, in the selection process, the qualifications, capability and competence of the key staff (assigned personnel) in relation to the scope of work and to interview any / all *Contractor* to confirm the Quality evaluation

### 2.5.3. The Contract Quality Plan (CQP)

The *Contractor* submits to the *Project Manager* within 30 days of Contract Date for review and acceptance prior to the commencement of work, a CQP which will detail the *Contractor's* organisation, quality assurance and quality control procedures within that organisation specific to this project. The CQP must be aligned to, and reference ISO 10005:2005 QMS, guidelines for quality plans and in compliance with the guideline in QM 240-105658000.

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

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

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#### 2.5.4. Quality Control Plan or Inspection and Test Plan

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

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

#### 2.5.5. Operational Documents

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

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

#### 2.5.6. Inspections and Tests

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

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

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

- a) The *Contractor* is responsible for the inspection of all the work that is performed and the *Supervisor* only verifies that the work is conducted as per the *Works* Information.
- b) The *Contractor* conducts all inspections in accordance with the accepted ITP/QCP.
- c) The *Contractor* provides suitably qualified personnel to conduct on-and-offsite inspections

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- d) The *Contractor* ensures that all are inspected and approved before the *Supervisor* is invited for verification.
- e) The *Contractor* provides a minimum of five (5) working days' notice for local off-site inspections, 24 hours for local on-site inspection, and 21 working days' notice for foreign inspections. The notice contains copies of the *Contractor's* inspection reports.

### 2.5.7. Quality Responsibility

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

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

The *Supervisor* will be responsible for the following:

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

### 2.5.8. Non-Conformances and Defects

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

- a) The *Contractor's* Quality Manager keeps a register of all NC notifications issued
- b) Records of NCs notifications are kept and form part of the data book records.

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- c) Deviations from the Contract are treated as a non-conformance.

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

### 2.5.9. Quality Reporting

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

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

### 2.6. Programming constraints

The *Contractor* shall submit a program, compiled in Microsoft Project/Primavera or similar program, which will provide details of the list of activities and the duration of each activity. The program should be no longer than 18 months. The *Contractor* shall submit a program two weeks after the signing of the contract. The program shall be updated once a week during execution of the *Works*.

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

- a) Dedicated Civil Engineer/Technologist (minimum of 5 years' experience post-registration who specialises in Structural Engineering, professionally registered with ECSA as Engineer/Technologist).
- b) Dedicated Electrical Engineer/Technologist (minimum of 5 years' experience post-registration, professionally registered with ECSA as Engineer/Technologist).
- c) Mater Installation Electrician (minimum of 3 years relevant experience, registered with the Department of Labour)
- d) Dedicated Site manager (minimum of 4 years relevant experience and a minimum diploma in civil engineering)
- e) Dedicated Safety officer (SAMTRAC and minimum experience of 3 years relevant experience, professionally registered with SACPCMP as a Construction Health and Safety Officer)
- f) Dedicated Quality Officer (minimum of 3 years relevant experience and must have completed ISO 9001: 2015 (Management System) and ISO 9011 (Auditing))

And all statutory required appointed people as per construction regulations.

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

### 2.8. Invoicing and payment

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

- Name and address of the *Contractor* and the *Project Manager*.

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

## 2.9. Insurance provided by the *Employer*.

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

## 2.10. Contract change management.

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

- a) Bilateral
- b) Unilateral

Bilateral is when both Parties (*Contractor* and *Employer*) agree that a change is necessary. The second one is the unilateral whereby the *Employer* may exercise a right to modify the contract without the *contractor's* consent. In case of latter one, the Eskom procurement and supply chain management procedure-32-1034 must be followed.

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

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

## 2.11. Provision of bonds and guarantees.

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

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

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

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

The *Contractor* submits the following for compensation event assessment:

- a) Quotation indicating Current market rate if not included in the short schedule of cost components
- b) Labour time sheets
- c) Early warning to the Project Manager

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- d) Project Manager's Instruction
- e) Percentage fee applied
- f) CPA Calculation where short schedule of cost components rates were utilised
- g) Signed Record of decisions (ROD) or design change request form for Engineering design changes
- h) Revised programme where key date and completion date is affected
- i) Revised program where instructed to accelerate by the Project Manager
- j) Invoice from supplier and service providers

### **2.13. Training Workshops and technology transfer**

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

## **3. Engineering and the *Contractor's* design**

The *Contractor* shall design and construct the *Employer's Works* as per the *Works* information unique intensifier 15ENG GEN-2299.

### **3.1. *Employer's* design**

*Contractor* refers to the *Employer's Works* information as outlined in the documents with unique identifier 15ENG GEN-2299 Title Tutuka Power Station Scope of Work for Pavement, Roof Shelter and Drainage at the Storage Facilities.

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

*Contractor* refers to the *Employer's Works* information outlined in the documents with unique identifier 15ENG GEN-2299 Title Tutuka Power Station Scope of Work for Pavement, Roof Shelter and Drainage at the Storage Facilities. All the *Works* stated in the *Works* information are to be designed by the *Contractor*.

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

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

#### **3.3.1. Design Review Procedure**

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

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

#### **3.3.2. Process for Submission of Documents**

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

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### 3.3.3. Time Required for Acceptance of Design

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

### 3.4. Other requirements of the *Contractor's* design

*Contractor* refers to the *Employer's Works* information as outlined in the documents with unique identifier 15ENG GEN-2299 Title Tutuka Power Station Scope of Work for Pavement, Roof Shelter and Drainage at the Storage Facilities.

### 3.5. Use of *Contractor's* design

All *Contractor* designs shall only be used once review & approval of the designs has occurred by the *Employer*. The approval shall be submitted to the *Project Manager* in writing.

### 3.6. Design of Equipment

All designs of equipment by the *Contractor* shall only be used once review & approval of the designs has occurred. The review & approval shall be submitted to the *Project Manager*.

- The *Contractor* shall provide to the *Project Manager* and relevant Construction Management personnel the documentation for the warranties from manufacturers or suppliers of all equipment required in execution of the project at the three store yards.
- The *Employer* (Construction Health and Safety Agent) is obliged to ensure that proof to the effect that the designers comply with their obligations as stipulated in the Construction Regulations, section 6 is submitted during the application for a construction work permit.
- The *Contractor* is solely responsible for providing the protection of the equipment from damage or loss due to weather, fire, theft, unexplained disappearance or similar during the execution of the *Works*.
- The *Contractor* shall bear the cost of the replacement of any equipment or part thereof damaged or requiring replacement and all such costs shall be covered as per the required construction insurance taken out by *Contractor* for the construction of the *Works* at the three store yards
- The liability of the use of such equipment in the execution of the *Works* shall remain that of the *Contractor* (i.e. this includes the design and transport, storage, maintenance, use of the equipment).

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

No specialised equipment is identified as being required, however if any is required, the designs shall be provided by the *Contractor* and reviewed.

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

- Language: All documentation, including reports, manuals, etc. is in the English language.
- Manuals:

The technical, training, and maintenance manuals are provided for each type of a functional unit. Technical manuals include all technical data as well as the technical data and leaflets of each individual component provided. Where generic manuals are provided, an addendum is provided indicating the applicable project specific components.

Manuals are of a good quality and cover the following as a minimum:

- a) Technical descriptions of the equipment and component parts
- b) General arrangement drawings
- c) Installation instructions with drawings or pictures
- d) Operating and maintenance instructions for all components
- e) Detailed parts lists (accompanied by exploded view type drawings clearly detailing the part and uniquely identifying it)

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f) Spare part ordering instructions

Any special instructions pertaining to storage of spare parts or their shelf life is included in the maintenance manual. All drawings requested for component location, dismantling and re-assembly for maintenance are included in the maintenance manual. All special tools required for operating and maintenance of the equipment are presented in a form of a schedule in the operating and maintenance manual, respectively. The content of the training manual is based on the content of the technical, operating and maintenance manuals.

**3.8.1. Drawing Requirements**

The *Contractor* supplies reproducible drawings according to the Vendor Document Submittal Schedule (VDSS). The *Contractor* develops the following minimum requirements for the drawings:

**3.8.1.1. Drawing Numbering System**

The *Employer* supplies the proposed *Project Manager* drawing numbering system. The *Contractor* may assign his own drawing number as required to meet his document control system requirements.

**3.8.1.2. As-Built Drawings**

The *Contractor's* Staff will maintain a master set of red-lined as-built drawings. The *Contractor* will provide drawing mark-ups as work is completed. The *Project Manager* and the *Contractor* will ensure that all appropriate information is transferred to the field record copy of drawings. The *Project Manager* and the *Contractor* will check the "as-builds" for completeness and accuracy.

The following types of drawings will be updated to as-built status:

- P&IDs
- Underground utilities drawings
- Plant arrangements
- Civil & Structural drawings
- Piping layouts

**4. Procurement**

**4.1. People**

**4.1.1. Minimum requirements of people employed on the Site.**

Minimum requirements of people employed on the Site:

- Police clearance
- Medicals
- Induction

**4.1.2. BBBEE and preferencing scheme**

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

B-BBEE Status Level of Contributor	Number of points (90/10 system)
1	10

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2	9
3	6
4	5
5	4
6	3
7	2
8	1
Non-compliant contributor	0

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

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

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

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

**4.1.3. Supplier Development Localisation and Industrialization (SDL&I)**

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

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

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

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

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

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

#### 4.1.3.1. Contract Skills Development Goals (CSDG):

The Standard for Developing Skills through Infrastructure Contracts published by the Construction Industry Development Board on 03 July 2020 (Board Notice 363 of 2020, Government Gazette 43495) ("the CIDB Skills Standard") will apply to this contract. In terms of the classification system of engineering and construction Works contracts the Works is classified as Civil Engineering Works (CE). As such for the purposes of the CIDB Skills Standard the Contract Skills Development Goal (CSDG) for this contract is 0.25% of the Accepted Contract Amount.

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

## 4.2. Subcontracting

### 4.2.1 Preferred subcontractors

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

### 4.2.2 Subcontract documentation, and assessment of subcontract tenders

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

### 4.2.3 Limitations on subcontracting

*Contractor* may sub-contract at least 10% of the Contract amount to one or more suppliers on the following categories of suppliers:

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

## Tender Returnables:

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

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The limitation in terms of percentage that the *Contractor* subcontract shall be agreed upon by both parties unless otherwise stated on the tender returnable as per the Procurement and Supply Chain management policies and procedures. Specialised work shall be subcontracted accordingly. Sub-contracting to align with skills and competency aligning with *Employer's* scope of work as outlined in the documents with unique identifier 15ENG GEN-2299 Title Tutuka Power Station Scope of Work for Pavement, Roof Shelter and Drainage at the Storage Facilities.

### **4.3. Plant and Materials**

#### **4.3.1 Quality**

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

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

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

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

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

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

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

Typical holding points are listed below:

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

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

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

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

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

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

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

#### **4.3.3 *Contractor's* procurement of Plant and Materials**

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

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

#### **4.3.4 Spares and consumables.**

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

#### **4.4. Tests and inspections before delivery**

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

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

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

The Supervisor carries out quality inspections at his discretion. All inspections and testing are performed in accordance with the quality control plan (QCP) developed by the *Contractor*.

The *Project Manager*, *Supervisor* and Others are provided access to the *Contractor's* premises for the purpose including but not limited to:

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

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

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

#### **4.5. Marking Plant and Materials outside the Working Areas**

In addition to the information required when shipping (detailed in shipping procedure developed by the Contractor) the Plant and Material, the Contractor marks all Plant and Material with the following information while outside the working areas and ensures that the information is accurate and clear/readable.

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

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

#### **4.6. Contractor's Equipment (including temporary Works).**

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

## **5 Construction**

### **5.1 Temporary Works, Site services & construction constraints**

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

##### **5.1.1.1. Access to Site and Permit to Work System**

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

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

The Contractor shall provide Eskom with a clear criminal record not older than thirty (30) days from a reputable screening company for each of its employees. If the principal Contractor appoints a Subcontractor, the same provisions and measures will apply to the Subcontractor's employees. The Contractor shall implement all such security measures for the safe performance of the work as required in the scope of the contract.

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

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

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

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

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

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

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

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

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

#### **5.1.1.2. Site Regulations**

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

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

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

#### **5.1.2 Restrictions to access on Site, roads, walkways, and barricades.**

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

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

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

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

#### **5.1.4 Health and safety facilities on Site**

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

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

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

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

#### **5.1.6 Title to materials from demolition and excavation**

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

#### **5.1.7 Cooperating with and obtaining acceptance of Others**

The *Contractor* co-operates with Others in obtaining and providing information which they need in connection with the *Works*.

As part of the tender returnable, the *Contractor* provides a mark-up of the area required for his construction activities showing amongst others excavation perimeter, material storage and equipment layout to enable the *Employer* to assess interface with *Others*. The *Contractor* further submits a construction method statement and risk assessment advising on his proposed approach and methodology to mitigate risks described above and any other risks which may impede successful execution of the works

#### **5.1.8 Publicity and progress photographs**

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

#### **5.1.9 Contractor's Equipment**

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

- a) The *Contractor* provides all Equipment that is required to complete the *Works*.
- b) The *Contractor* shall ensure that all his construction labour and equipment remain within the fenced off allocated construction area.

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- a) The *Contractor* shall ensure that any staff, labour, or equipment moving outside his allocated construction site does not obstruct the normal operation of the power station. Any additional access routes required must be coordinated with the *Project Manager*.
- b) The *Contractor* must keep daily records of his equipment used on Site and the Working Areas (distinguishing between owned and hired Equipment) with access to such daily records available for inspection by the *Project Manager* at all reasonable times.
- c) All Equipment used by the *Contractor* in providing the *Works* shall comply with the General Machinery Regulation 4 of the Occupational Health and Safety Act (Act 85 of 1993).

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

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

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

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

**5.1.10 Equipment provided by the Employer**

None

**5.1.11 Site services and facilities**

Refer to 5.1.12

**5.1.12 Facilities provided by the Contractor**

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

Site Facilities, Utilities and Services	Provided by		Details
	Contractor	Employer	
<b>Field Office</b>			
Field office structure	X		
Field office furniture	X		
Field office equipment	X		

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

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

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Site Facilities, Utilities and Services	Provided by		Details
	Contractor	Employer	
Contractor field office cleaning service	X		
Hazardous waste disposal and clean up	X		
<b>Food Services</b>			
Allowed onsite - Yes/No	X		Contractor to provide meals for his teams. Allowed to bring to site
Tuck-shop		X	

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

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

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

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

**5.1.14 Survey control and setting out of the Works**

The Project Manager designates the working area boundary limits and assigns for the Contractor’s use access roads, parking areas, storage areas, existing facilities areas and construction areas. The Contractor does not trespass in or on areas not designated for his work.

The Contractor is responsible for keeping Contractor’s personnel out of areas not designated for Contractor’s use, except, in the case of isolated work located within such areas for which the Contractor is authorised to do so.

The control points will be established by the Contractor. Land surveys will be done by the Contractor before and after clear and grub, before and after topsoil strip and after final excavation before construction commences.

The Contractor will ensure that application for excavation permit is done well in advance before any excavation work can start in an area.

In addition, the survey information is to be according to the National LO co-ordinate grid system and is to be provided in digital format (either YXZ format or preferably in Model Maker file system ver. 7 or above).

**5.1.15 Excavation and associated water control**

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

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It is the responsibility of the *Contractor* to ensure that all excavations are rendered safe and suitable for construction and conform to the requirements of the Construction Regulations (CR 13). The *Contractor* shall not continue construction in conditions that the *Project Manager* does not approve of. The *Contractor* will be required to design and submit for approval the methods of excavation.

Controlling water from excavations is done as required by the Environmental legislation and only after a method statement to this regard has been accepted by the *Project Manager*.

The *Contractor* must ensure that adequate pumping capacity is provided for the continual pumping of water from excavations. Water may be contaminated and should not be discharged into the environment unless tested and approved by the *Project Manager*.

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

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

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

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

The *Contractor* is held responsible for any damage to known services (i.e. services that are within the Site and are shown on the drawings) and he takes all necessary measures to protect them. All work or protective measures are subject to acceptance by the Supervisor. In the event of a service being damaged, the *Contractor* immediately notifies the *Supervisor*, the *Contractor* does not repair any such service unless instructed to do so.

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

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

#### **5.1.17 Control of noise, dust, water and waste**

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

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

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

For the purpose hereof, "waste" any matter, whether liquid or solid or any combination thereof, which is a by-product, emission, residue or remainder of any process or activity carried out in connection with the

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*Works* and which is not reused on the Site in the in the ordinary course of carrying out the *Works* within seven days of production.

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

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

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

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

#### **5.1.18 Sequences of construction or installation**

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

#### **5.1.19 Giving notice of work to be covered up.**

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

#### **5.1.20 Hook ups to existing Works**

The *Contractor* shall not hook up to any existing structure/*Works* unless permission sought and is granted by the *Employer*. In cases whereby the *Employer/ Project Manager* are not reachable the *Contractor* shall use his/her discretion on the basis that safety has been observed, and hazard conditions observed and monitored.

## **5.2 Completion, testing, commissioning, and correction of Defects**

### **5.2.1 Work to be done by the Completion Date**

On or before the Completion Date the *Contractor* shall have done everything required to Provide the *Works*. The *Project Manager* cannot certify Completion until all the work has been done and is also free of Defects which would have, in his opinion, prevented the *Employer* from using the *Works* and Others from doing their work.

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

Once all *Contractor* construction activities are complete, the *Contractor* will hand over the *Works* to the *Project Manager* for testing and checkout. Completeness of the construction will be verified through a joint walk down between the *Project Manager* and *Contractor*. Any minor outstanding work items found during the construction walk down will be recorded as Defects, and dates will be established for resolution of these Defects.

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Constructed activities/ work with major omissions, errors, or problems found during the walk down will not be accepted for commissioning from construction. All construction documentation will be turned over to the *Project Manager* for review. This documentation will be reviewed for completeness and will be included in the final safety clearance with the *Project Manager*.

Once the *Project Manager* has accepted a part of the Works from construction, the responsible *Project Manager* will direct all pre-operational tests required to ready the subsystem for initial operation. have, in his opinion, prevented the *Employer* from using the Works and Others from doing their work.

**5.2.2 Use of the Works before Completion has been certified**

The *Employer* may not use part of the Works before the *Project Manager* has certified Sectional Completion.

**5.2.3 Materials facilities and samples for tests and inspections**

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

**5.2.4 Commissioning**

*Contractor* to perform Earth resistant test and issue a Certificate of Compliance.

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

Not applicable

**5.2.6 Take over procedures**

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

**5.2.7 Access given by the Employer for correction of Defects**

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

**5.2.8 Performance tests after Completion**

Not applicable

**5.2.9 Training and technology transfer**

Training shall be provided to the *Employer* at the end of the project covering the maintenance requirements of the erected roof shelter and drainage infrastructure.

**5.2.10 Operational maintenance after Completion**

Not applicable

**6. Plant and Materials standards and workmanship**

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

**6.1. General**

**Table 2: General National/International Standards**

SANS and other applicable Local and International Standards		
No	Document No	Description / Title
1	OHSA	Occupational Health and Safety Act South Africa No 85 and

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

**Table 3: Eskom Project Management and Project Controls Specifications**

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

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Applicable Eskom Specifications		
No	Document No	Description / Title
		Management Work Instruction

## 6.2. Civil engineering and structural Works

### 6.2.1. SANS Specifications

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

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

SANS 1200 TITLE	NUMBER	REV	DATE
GENERAL	A	3	30-07-2002
SITE CLEARANCE	C	1A	01-08-1982
EARTHWORKS	D	3	30-07-2002
EARTHWORKS (Pipe trenches)	DB	3	30-07-2002
SMALL EARTH DAMS	DE		
CONCRETE (STRUCTURAL)	D		
GABIONS & PITCHING	DK		
EARTHWORKS (Roads, Subgrade)	DM		
CONCRETE (SMALL WORKS)	GA	2	30-07-2002
STRUCTURAL STEELWORK	H		
MEDIUM PRESSURE PIPELINES	L		
BEDDING (Pipes)	LB	2	30-07-2002
STORMWATER DRAINAGE	LE		
ROADS (General)	M		
SEGMENTED PAVING	MJ		
KERBING AND CHANNELING	MK		
SANS 10100 TITLE	NUMBER	REV	DATE
10100-1: REINFORCED CONCRETE DESIGN			
10162:1: STRUCTURAL STEEL DESIGN			
10100-2: THE STRUCTURAL USE OF CONCRETE PART 2: MATERIALS AND EXECUTION WORK			
SANS 1058 TITLE	NUMBER	REV	DATE
1058- CONCRETE PAVING BLOCKS			

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SANS 1058- Concrete paving blocks

[12] SANS 10100-1: Reinforced Concrete Design

[13] SANS 10162:1: Structural Steel Design

[14] SANS 10100-2: the Structural use of Concrete Part 2: Materials and execution of Work

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

## **7. List of drawings**

### **7.1. Drawings issued by the *Employer***

*Contractor* refers to the *Employer's Works* information as outlined in the documents with unique identifier 15ENG GEN-2299 Title Tutuka Power Station Scope of Work for Pavement, Roof Shelter and Drainage at the Storage Facilities.

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

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

Typical sub headings could be

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

This section could also be compiled as a separate file.

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**PART 4: SITE INFORMATION**

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

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## PART 4: SITE INFORMATION

### 1. General description

Tutuka Power Station (P.S.) is situated near the town of Standerton in Mpumalanga, South Africa. The coordinates of the power station are 26°46'43"S, 29°21'07"E. It is a coal fired power station with six (6) generating units of 609 MW each. The first unit was commissioned in July 1985 and has a 50-year life, the decommissioning of the first unit (Unit 1) is expected to be decommissioned in 2030 and the last unit (Unit 6) decommissioned in 2041.

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



### 2. Subsoil information

*Contractor* to conduct investigations on subsoil information

### 3. Hidden services

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

### 4. Other reports and publicly available information

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