



NEC3 Engineering & Construction Contract

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

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

for **The Supply and Refurbishment of Fire Protection
System at Main & Security Buildings at Eskom
Academy of Learning**

Contents:	No of pages
Part C1 Agreements & Contract Data	[•]
Part C2 Pricing Data	[•]
Part C3 Scope of Work	[•]
Part C4 Site Information	[•]

CONTRACT No. [Insert at award stage]

Part C1: Agreements & Contract Data

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

C1.1 Form of Offer & Acceptance

Offer

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

Eskom Academy of Learning: The Refurbishment of Fire Protection System

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.

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

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

Signature(s)

Name(s) _____

Capacity _____

For the tenderer:

(Insert name and address of organisation)

Name & signature of witness

Date

Tenderer's CIDB registration number (if applicable)

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

Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

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

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

Signature(s)

Name(s)

Capacity

**for the
Employer**

(Insert name and address of organisation)

Name &
signature of
witness

Date

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

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

Note:

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

No.	Subject	Details
1	[•]	[•]
2	[•]	[•]
3	[•]	[•]
4	[•]	[•]
5	[•]	[•]
6	[•]	[•]
7	[•]	[•]

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

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

For the tenderer:

For the Employer

Signature _____

Name _____

Capacity _____

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

(Insert name and address of organisation)

Name & signature of witness _____

Date _____

C1.2 ECC3 Contract Data

Part one - Data provided by the *Employer*

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

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
	dispute resolution Option	B: Priced contract with Bills of Quantities
	and secondary Options	W1: Dispute resolution procedure
		X2 Changes in the law
		X5: Sectional Completion
		X7: Delay damages
		X16: Retention
		X17: Low performance damages
		X18: Limitation of liability
		Z: <i>Additional conditions of contract</i>
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> is (Name):	Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa
	Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
10.1	The <i>Project Manager</i> is: (Name)	To be advised at contract award stage

	Address	Eskom Academy of Learning, Dale Road P/Bag X13, Midrand, 1685	
	Tel	[•]	
	Fax	[•]	
	e-mail	[•]	
10.1	The <i>Supervisor</i> is: (Name)	To be advised by the Employer (at contract award stage)	
	Address	The Main & Security Buildings at Eskom Academy of Learning, Dale Road P/Bag X13, Midrand, 1685	
	Tel No.	[•]	
	Fax No.	[•]	
	e-mail	[•]	
11.2(13)	The <i>works</i> are	The Refurbishment of Fire Protection System - at Eskom Academy of Learning	
11.2(14)	The following matters will be included in the Risk Register	The contractor will need to be aware that the site is currently partially operational, and should provide the necessary hoarding around areas being worked on COVID-19 lockdown delays for which proof is required from the supplier. Further risks to be identified at the initial project meeting and on an ongoing basis	
11.2(15)	The <i>boundaries of the site</i> are	Eskom Academy of Learning site	
11.2(16)	The Site Information is in	Part 4: Site Information	
11.2(19)	The Works Information is in	Part 3: Scope of Work and all documents and drawings to which it makes reference.	
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa	
13.1	The <i>language of this contract</i> is	English	
13.3	The <i>period for reply</i> is	Five (5) working days	
2	The Contractor's main responsibilities	Data required by this section of the core clauses is provided by the Contractor in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.	
3	Time		
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	18 months	
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	Condition to be met	key date
		1 Notice of construction be given to Department of Labour	Before Execution of works.

		2	Security clearance of personnel and induction	Before Execution of works
		3	Safety File Submission and induction	Before Execution of works.
		4	Formal notification of area to work on and formal approval – EAL security	Before Execution of works.

30.1	The <i>access dates</i> are:	Part of the Site	Date
		1	Eskom Academy of Learning with all regulation approvals to access and work
			Before Execution of works.

31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	2 weeks of the Contract Date.
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31.2	The <i>starting date</i> is	The date on which the site is handed over – to be given after contract award
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32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	2 weeks.
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35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.	All refurbishment work shall be completed before the <i>Employer</i> can take over the <i>works</i> – no sectional completion
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4 Testing and Defects

42.2	The <i>defects date</i> is	52 weeks after Completion of the whole of the <i>works</i>.
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43.2	The <i>defect correction period</i> is	2 weeks
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5 Payment

50.1	The <i>assessment interval</i> is	On the 25th of each month
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51.1	The <i>currency of this contract</i> is the	South African Rand.
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51.2	The period within which payments are made is	4 weeks.
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51.4	The <i>interest rate</i> is	the publicly quoted prime rate of interest (calculated on a 365 day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it
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shall not be necessary to prove) for amounts due in Rands and

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

6 Compensation events

<p>60.1(13) The place where weather is to be recorded is:</p> <p>The <i>weather measurements</i> to be recorded for each calendar month are,</p> <p>The <i>weather measurements</i> are supplied by</p> <p>The <i>weather data</i> are the records of past <i>weather measurements</i> for each calendar month which were recorded at:</p> <p>and which are available from:</p>	<p>Midrand, Gauteng and surrounding areas to the site</p> <p>the cumulative rainfall (mm)</p> <p>the number of days with rainfall more than 10 mm</p> <p>the number of days with minimum air temperature less than 0 degrees Celsius</p> <p>the number of days with snow lying at 09:00 hours South African Time</p> <p>and these measurements:</p> <p>The South African Weather Bureau at the nearest station next to the site.</p> <p>the South African Weather Bureau and included in Annexure A to this Contract Data provided by the Employer</p>
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<p>60.1(13) Assumed values for the ten year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are:</p>	<p>As stated in Annexure A to this Contract Data provided by the Employer.</p> <p>Note: If this arrangement is used, delete the rows above for 60.1(13) and delete this note.</p>
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7	Title	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
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8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	There are no additional risks
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84.1	The <i>Employer</i> provides these additional insurances	as stated for "Format A" available on http://www.eskom.co.za/Tenders/InsurancePoliciesProcedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx (See Annexure B for basic guidance)
84.1	The <i>Contractor</i> provides these additional insurances:	as stated for "Format A"
84.2	The insurance against loss of or damage to the <i>works</i> , Plant and Materials is to include cover for Plant and Materials provided by the <i>Employer</i> for an amount of	[•]
84.2	The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the <i>works</i> , Plant, 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 for any one event is	whatever the <i>Contractor</i> deems necessary in addition to that provided by the <i>Employer</i>.
84.2	The minimum limit of indemnity for insurance in respect of 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 for any one event is	As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the <i>Contractor's</i> common law liability for people falling outside the scope of the Act with a limit of Indemnity of not less than R500 000 (Five hundred thousand Rands).
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9	Termination	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
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10	Data for main Option clause	
B	Priced contract with Bills of Quantities	
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11	Data for Option W1	
W1.1	The <i>Adjudicator</i> is	the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of

		Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).		
	Address	TBA		
	Tel No.	TBA		
	Fax No.	TBA		
	e-mail	TBA		
W1.2(3)	The <i>Adjudicator nominating body</i> is:	the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See www.ice-sa.org.za) or its successor body.		
W1.4(2)	The <i>tribunal</i> is:	arbitration.		
W1.4(5)	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.		
	The place where arbitration is to be held is	[Gauteng] South Africa		
	The person or organisation who will choose an arbitrator	the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.		
	- if the Parties cannot agree a choice or			
	- if the arbitration procedure does not state who selects an arbitrator, is			
12	Data for secondary Option clauses			
X2	Changes in the law	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.		
X5	Sectional Completion			
X5.1	The <i>completion date</i> for each <i>section</i> of the <i>works</i> is:	Section	Description	Completion date
		1	Main Building	as per the approved schedule
			Security Building	
X5 & X7	Sectional Completion and delay damages used together			

X7.1 X5.1	Delay damages for late Completion of the <i>sections</i> of the <i>works</i> are:	section	Description	Amount per day
		1	Main Building	R5000.00
			Security Building	R5000.00
	The total delay damages payable by the <i>Contractor</i> does not exceed:	Maximum of 20% of Contract Value		
X16	Retention (not used with Option F)			
X16.1	The <i>retention free amount</i> is	0% of contract value		
	The <i>retention percentage</i> is	10% deduction on assessment of each Payment Certificate		
X17	Low performance damages			
X17.1	The amounts for low performance damages are:	Amount	Performance level	
		R 200,000.00 or cost of low performance damages stated	For the whole <i>Works</i>	
X18	Limitation of liability			
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	R0.0 (zero Rand)		
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	the amount of the deductibles relevant to the event described in the insurance policy format selected in the data for clause 84.1 above, which policy is available on <i>http://www.eskom.co.za/Tenders/InsurancePolicies/Procedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx</i>		
X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to	The greater of <ul style="list-style-type: none"> • 10% of the total of the Prices at the Contract Date and • the amounts excluded and unrecoverable from the <i>Employer's</i> assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus R15M first amount payable in terms of the <i>Employer's</i> assets policy. 		
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:	the total of the Prices other than for the additional excluded matters.		

The *Contractor's* total liability for the additional excluded matters is not limited.

The additional excluded matters are amounts for which the *Contractor* is liable under this contract for

- Defects due to his design which arise before the Defects Certificate is issued,
- Defects due to manufacture and fabrication outside the Site,
- loss of or damage to property (other than the *works, Plant and Materials*),
 - death of or injury to a person and
 - infringement of an intellectual property right.

X18.5 The *end of liability date* is

(i) Seven (7) years after the *defects date* for latent Defects and

(ii) the date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter.

A latent Defect is a Defect which would not have been discovered on reasonable inspection by the *Employer* or the *Supervisor* before the *defects date*, without requiring any inspection not ordinarily carried out by the *Employer* or the *Supervisor* during that period.

If the *Employer* or the *Supervisor* do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the *Employer* or the *Supervisor* to have discovered the Defect.

Z The *Additional conditions of contract* are

Z1 to Z12 always apply.

Z1 Cession delegation and assignment

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

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

Z2 Joint ventures

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

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

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

Z4 Confidentiality

- Z4.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.
- Z4.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Project Manager*.
- Z4.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.
- Z4.4 The taking of images (whether photographs, video footage or otherwise) of the *works* or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Project Manager*. All rights in and to all such images vests exclusively in the *Employer*.
- Z4.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

Z5 Waiver and estoppel: Add to core clause 12.3:

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

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

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

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

- Z7.1 Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer's* procedures stated in the Works Information, showing the amount due for payment equal to that stated in the payment certificate.
- Z7.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.
- Z7.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer's* VAT number 4740101508 on each invoice he submits for payment.

Z8 Notifying compensation events

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 or a judicial management 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 Subcontractors or the Subcontractor's employees,

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

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

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

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

Z 12.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.

Z 12.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Works 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 Works for this reason.

- Z 12.3 If the *Employer* terminates the *Contractor's* obligation to Provide the Works for this reason, the procedures and amounts due on termination are respectively P1, P2 and P3, and A1 and A3.
- Z 12.4 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.

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	<i>Weather measurement</i>				
	Cumulative rainfall (mm)	Number of days with rain more than 10mm	Number of days with min air temp < 0 deg.C	Number of days with snow lying at 08:00 CAT	[Other measurements if applicable]
January	[•]	[•]	[•]	[•]	
February	[•]	[•]	[•]	[•]	
March	[•]	[•]	[•]	[•]	
April	[•]	[•]	[•]	[•]	
May	[•]	[•]	[•]	[•]	
June	[•]	[•]	[•]	[•]	
July	[•]	[•]	[•]	[•]	
August	[•]	[•]	[•]	[•]	
September	[•]	[•]	[•]	[•]	
October	[•]	[•]	[•]	[•]	
November	[•]	[•]	[•]	[•]	
December	[•]	[•]	[•]	[•]	

Only the difference between the more adverse recorded weather and the equivalent measurement given above is taken into account in assessing a compensation event.

Annexure B: Insurance provided by the Employer

These notes are provided as guidance to tendering contractors and the Contractor about the insurance provided by the Employer. The Contractor must obtain its own advice. Details of the insurance itself are available from the internet web link given below.

1. For the purpose of works contracts, insurance provided by Eskom (the *Employer*) has been arranged on the basis of “project” or “contract” value, where the value is the total of the Prices at Completion of the whole of the works including VAT.

A “project” is a collection of contracts or work packages to be undertaken as part of a single identified capital expansion or refurbishment of a particular asset or facility.

A “contract” is a single contract not linked to or being part of a “project”.

2. For ECC3 there are three main “formats” of cover and deductible structure; Format A, Format B and Format Dx.

Format A is for a project or contract value less than or equal to R350M (three hundred and fifty million Rand) inclusive of VAT.

Format B is for a project or contract value greater than R350M. (three hundred and fifty million Rand) inclusive of VAT.

In the case of contracts / packages within a project:

- For a contract / package of R50M which is part of a R400M project, Format B will apply
- For a contract / package of R250M which is part of a R6 billion project, Format B will apply;
- For a contract / package of R120M which is part of a R350M project Format A will apply;

For a contract which is not part of a project the same limits apply:

- For a contract of R50M, Format A will apply
- For a contract of R355M, Format B will apply.

Format Dx applies only to Distribution Division projects and contracts. If a Distribution Division project or contract exceeds the Format A limit, the Eskom Insurance Management Services [EIMS] need to be contacted for advice on how to formulate the insurance cover. Cover and deductibles for Distribution Division are per the relevant policy available on the internet web link given below.

Format A generally applies to Transmission Division projects and contracts. If a Transmission Division project or contract exceeds the Format A limit, the Eskom Insurance Management Services [EIMS] need to be contacted for advice on how to formulate the insurance cover.

3. Tendering contractors should note that cover provided by the *Employer* is only per the policies available on the internet web link listed below and may not be the cover required by the tendering contractor or as intended by each of the listed insurances in the left hand column of the Insurance Table in clause 84.2. In terms of clause 84.1 “the *Contractor* provides the insurances stated in the Insurance Table except any insurance which the *Employer* is to provide”. Hence the *Contractor* provides insurance which the *Employer* does not provide and in cases where the *Employer* does provide insurance the *Contractor* insures for the difference between what the Insurance Table requires and what the *Employer* provides.
4. When the Marine Insurance is required the *Contractor* needs to obtain a copy of the latest edition of Eskom’s Marine Policies Procedures found at internet website given below.
5. **Further information and full details of all Eskom provided policies and procedures may be obtained from:**

http://www.eskom.co.za/live/content.php?Item_ID=9248

Annexure C: The *Employer's* Panel of Adjudicators

The following persons listed in alphabetical order of their surname have indicated their willingness to be included in the Eskom Panel of Adjudicators. Their CV's may be obtained by using the contact details provided.

Name	Location	Contact details (phone & e mail)
Nigel ANDREWS	Gauteng	+27 11 836-6760 nigela@quoin.net
Andrew BAIRD	Gauteng	+27 11 803 3008 andrewbaird@ecsconsult.co.za
Christopher BINNINGTON	Gauteng	+27 11 888-6141 cdb@bca.co.za
Peter HIGGINS	UK	+44 1293 873 868 peterhiggins@pdconsult.co.uk
Bruce LEECH	Gauteng	+27 11 290 4000 leech@counsel.co.za
Nigel NILEN	Gauteng	+27 11 465 3601; nilences@global.co.za
Peter THURLOW	Gauteng	+27 11 787 6226 info@thurlowassoc.com

Information about the Panel and appointment of the selected Adjudicator is available from Eskom Supply Chain Operations management, by contacting Leighton Itholeng (Tel.: +27 (0)11 800 4031) (Fax :+27 (0)86 668 0419) E-mail: Leighton.Itholeng@eskom.co.za

C1.2 Contract Data

Part two - Data provided by the Contractor

Notes to a tendering contractor:

1. Please read both the NEC3 Engineering and Construction Contract (April 2013) and the relevant parts of its Guidance Notes (ECC3-GN)² in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on pages 156 to 158 of the ECC3 (April 2013) Guidance Notes.
2. The number of the clause which requires the data is shown in the left hand column for each statement however other clauses may also use the same data
3. Where a form field like this [] appears, data is required to be inserted relevant to the option selected. Click on the form field **once** and type in the data. Otherwise complete by hand and in ink.

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

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	% %
11.2(18)	The <i>working areas</i> are the Site and	
24.1	The <i>Contractor's</i> key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	CV's (and further key persons data including CVs) are appended to Tender Schedule entitled .

² Available from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009 or see www.ecs.co.za

11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is			
11.2(14)	The following matters will be included in the Risk Register			
11.2(19)	The Works Information for the <i>Contractor's</i> design is in:			
31.1	The programme identified in the Contract Data is			
A	Priced contract with activity schedule			
11.2(20)	The <i>activity schedule</i> is in	(in figures) (in words), excluding VAT		
11.2(30)	The tendered total of the Prices is			
	Data for Schedules of Cost Components	<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	Priced contract with bill of quantities	Data for the Shorter Schedule of Cost Components		
41 in SSCC	The percentage for people overheads is:	%		
21 in SSCC	The published list of Equipment is the last edition of the list published by The percentage for adjustment for Equipment in the published list is	Minus %		
22 in SSCC	The rates of other Equipment are:	Equipment	Size or capacity	Rate
61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates. Please insert another schedule if foreign resources may also be used	Category of employee	Hourly rate	

62 in SSCC	The percentage for design overheads is	%
63 in SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:	

C1.3 Forms of Securities

Pro formas for Bonds & Guarantees

For use with the NEC3 Engineering & Construction Contract (June 2005)

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

Option X16: Retention

The *Contractor* may provide a Retention Money Guarantee in the form stated here. When the *Employer* receives and accepts a Retention Money Guarantee exactly in the form stated he will instruct the *Project Manager* not to assess any amount be retained in terms of secondary Option X16.

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.

Pro forma Retention Money Guarantee (may be used when Option X16 applies)

(to be reproduced exactly as shown below on the letterhead of the Bank providing the Guarantee)

Eskom Holdings SOC Limited
Megawatt Park
Maxwell Drive
Sandton
Johannesburg

Date:

Dear Sirs

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

Retention Money 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 Limited, 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); [Drafting Note: Insert amount of Retention Money Guarantee.].
 - 1.8 "Project" - means the.....
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 director of Eskom or his authorised delegate.
 - 3.2 state the amount claimed ("the Demand Amount");
 - 3.3 state that the Contractor has failed to carry out his obligation(s) to rectify certain defect(s) for which he is responsible under the Contract (and the nature of such defect(s)) alternatively 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 **Error! Reference source not found.** 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 _____ Bank's seal or stamp

For and behalf of the Bank

Bank Signatory: _____

Bank Signatory: _____

Witness: _____

Witness: _____

PART 2: PRICING DATA

ECC3 Option B

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

C2.1 Pricing assumptions: Option B

The conditions of contract

How work is priced and assessed for payment

Clause 11 in NEC3 Engineering and Construction Contract, June 2005 (ECC3) Option B states:

Identified and defined terms 11 (21) The Bill of Quantities is the *bill of quantities* as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.

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

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

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

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

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

Function of the Bill of Quantities

Clause 55.1 in Option B states, "Information in the Bill of Quantities is not Works Information or Site Information". This confirms that instructions to do work or 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 (June 2005) Guidance Notes before preparing the *bill of quantities* or before entering rates and lump sums into the *bill*.

The NEC approach to the P & G bill assumes use will be made of method related charges for Equipment applied to Providing the Works based on durations shown in the Accepted Programme, fixed charges for the use of Equipment that is required throughout the construction phase, time related charges for people working in a supervisory capacity for the period required, and lump sum charges for other facilities or services not directly related to performing work items typically included in other parts of the bill. The P & G section of the bill is not used for the assessment of compensation events.

Measurement and payment

Symbols

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

Abbreviation	Unit
%	percent
h	hour
ha	hectare
kg	kilogram
kl	kilolitre
km	kilometre
km-pass	kilometre-pass
kPa	kilopascal
kW	kilowatt
l	litre
m	metre
mm	millimetre
m ²	square metre
m ² -pass	square metre pass
m ³	cubic metre
m ³ -km	cubic metre-kilometre
MN	meganewton
MN.m	meganewton-metre
MPa	megapascal
No.	number
Prov sum ³	provisional sum
PC-sum	prime cost sum
R/only	Rate only
sum	Lump sum
t	ton (1000kg)
W/day	Work day

General assumptions

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

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.

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

³ Provisional Sums should not be used unless absolutely unavoidable. Rather include specifications and associated bill items for the most likely scope of work, and then change later using the compensation event procedure if necessary.

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.

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.

Departures from the *method of measurement*

Amplification of or assumptions about measurement items

For the avoidance of doubt 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.

C2.2 the *bill of quantities*

PART 3: SCOPE OF WORK

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

C3.1: EMPLOYER’S WORKS INFORMATION

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Description of the works

Executive overview

This is an Eskom Real Estate Project for **the Eskom Academy of Learning's Refurbishment of the Fire Detection System at Main and Security Building**. The purpose of this project is to ensure that the Main and Security Buildings' Fire Detection System is fully compliant with the Health and Safety Regulations, and that the system is functioning optimally

Employer's objectives and purpose of the works

The purpose of the Works includes the following:

The scope of work includes a survey, design, procurement, construction, manufacturing, installation, testing, commissioning and training for the existing Ziton FDS at EAL. This includes the Control and Indicating Equipment (CIE), power supply equipment, communication networks, detectors, alarm devices, cabling and 3rd party system interfaces. An overview of the premises and building is shown on the last page of this document

Interpretation and terminology

The following abbreviations are used in this Works Information:

Definition	Description
Acceptance	The <i>Employer</i> accept the condition or design but does not take responsibility from the Contractor
Approval	Written agreement or authorization by <i>Employer</i> . All requests for approval must be submitted in writing and any proposed deviation from specified requirements must be fully justified and agreed by <i>Employer</i> .
<i>Contractor</i>	Refers to the corporation appointed to perform the engineering, procurement, and construction Works required for the project.
Design freeze	Is a binding decision that defines the whole product, its parts or parameters and allows the continuation of the design based on that decision (no further changes can be made to the design, it is cut-off for the engineers)
<i>Employer</i>	Refers to Eskom Holdings State Owned Company
Interface	Interface in these document means either to hard wired or software interaction between the <i>Contractors</i> and/or other Works
Maintenance	Maintenance can be defined as the function of keeping components or equipment in, or restoring them to a serviceable condition so that they comply with design and statutory requirements and <i>Employer</i> standards. Maintenance includes the cleaning, removal of contaminants and waste, correct adjustment and setting, tightening, testing, fixing, refill, lubrication, rust prevention, touch up, refrigeration charge, servicing, inspection, replacement, re-installation, troubleshooting, calibration, condition determination, repair, modification, overhaul and rebuilding of equipment. Maintenance can be either preventative or corrective of nature.
Maintenance Management	Maintenance Management can be described as the management (planning, organising, leading and control) actions needed to ensure effective maintenance execution to provide the most efficient and optimum availability (capable of being used) and reliability (consistent quality) of the equipment installed.
Specification	The document/s forming part of the contract in which the methods of executing the various items of work to be done is described, as well as the

	nature and quality of the materials to be supplied and it includes technical schedules and drawings attached thereto as well as all samples and patterns
System	A set of things working together as parts of a mechanism or network in an organised manner or method such that the requirements of the System are achieved.
The Client	The end user will be Eskom who will be represented by Eskom Real Estate throughout the duration of the Project.
Unequipped spare	A functional unit that does not house any electrical components, but is intended to be used in future by retrofitting/modifying the functional unit.

The following abbreviations are used in this Works Information:

Abbreviation	Description
CoE	Centre of Excellence
C&I	Control and Instrumentation
EAL	Eskom Academy of Learning
EMaP	Engineering Management Plan
LPS	Low Pressure Services
LDC	Leadership Development Centre
OEM	Original Equipment Manufacturer
OPEX	Operating Expenditure
P&ID	Piping & Instrumentation Diagram
Qty	Quantity
SANS	South African National Standard

Definitions:

Definition	Description
Alarm zone	A geographical subdivision of the protected premises, in which the fire alarm warning can be given separately, and independently, of a fire alarm warning in any other alarm zone. (This is not necessarily the same zone as the detection zone).
Black-box (3rd Party Interface)	It is a stand-alone device or group of devices that is independent of the FDS or the DCS. The black-box may perform process interface, control and/or supervision tasks; all of which are performed independently of the FDS. A black box is typically supplied as part of a process skid system (e.g. HVAC, etc.). It contains the control tasks for the specific process plant concerned.
Contractor	The main or principle <i>Contractor</i> that is responsible for the <i>Works</i> of this project.
Control and Indicating Equipment (CIE)	It is a component or components of a fire detection and alarm system through which other components may be supplied with power and which are used to: <ul style="list-style-type: none"> • receive signals from the connected detectors, manual call points, alarm devices or any other devices (e.g. input/output units); • determine whether these signals correspond to a fire alarm condition; • indicate any such fire alarm condition audibly and visually; • indicate the location of the danger; and • possibly record any of this information; • monitor the correct functioning of the system and give audible and visible warning of any faults (e.g. short circuit, open circuit, or fault in the power supply);
Control Room	Core functional entity and its associated physical structure, where operators are stationed to carry out centralized control, monitoring and administrative responsibilities.
Controlled Disclosure	Controlled disclosure to external parties (either enforced by law, or discretionary).

Definition	Description
Controller	It is an independent fully programmable microprocessor based computing unit in which the functional logic is executed to perform plant/premises control and process interface tasks.
Critical	Any part or area of plant/facility is seen to be critical if its loss during a fire incident has the potential to cause the following, either immediately or within a 6-12 hour period after the incident: <ul style="list-style-type: none"> • Loss of transmission or distribution capability; • Permanent loss of production or products; or • Danger to fire-fighting personnel involved in fighting the fire
Detection Zone	A subdivision of the protected premises such that the occurrence of a fire within it will be indicated by a fire alarm system separately from an indication of a fire in any other subdivision. (This is not necessarily the same zone as the alarm zone)
Employer	The Client for this project being Eskom Holdings.
Fire Alarm Device	A device which can be used to warn occupants of a fire condition, either audibly or visually, such as sounders or strobes/beacons.
Fire Detection and Alarming System (FDS)	It includes systems that range from those comprising only one or two manual call points and sounders to complex networked systems that incorporate a large number of automatic fire detectors, manual call points and sounders, connected to numerous inter-communicating control and indicating panels.
Fire detector	A device which can detect the presence of a fire by any means, such as smoke, heat, combustion gases, radiation, light, etc. (Not necessarily a smoke detector)
Human Machine Interface (HMI)	The human machine interface is the software package on the SCADA server via which the operator interacts (operates & monitors) with the plant or system. The HMI is inclusive of all graphics, alarm pages, event pages, trends, plots, and other elements that form part of the software package used to operate and monitor the plant. The HMI is presented to the operator via the Operator Thin Client workstation.
KVM module	It is a device or set of devices that allows the input/output devices of a workstation – i.e. the keyboards, video monitors and mouse – to be physically removed from the workstation computer such that workstation computer shall be remotely accessed.
Manual Call Point (MCP)	A device which is manually activated to indicate that there is a fire and initiates an alarm.
Network cabling	It refers to all the cabling that forms part of the communication networks.
Obsolete	No longer supported or reached the end of its useful life and end of active support from the OEM, being replaced by something newer.
Original Equipment Manufacturer (OEM)	It is the internationally registered legal entity who owns the rights for the manufacture, design and repair of a system or equipment.
Others	Contractor(s) that is responsible for the works of other projects.
SCADA system	In the context of this report, the SCADA system is made up of a combination of hardware (servers, workstations, switching devices) and software (operating system, application software) that is responsible for exchanging data with the FDS control and indication equipment (CIE); and representing data to the 1 st responders.
Spare-Equipped-Circuit	A circuit identified in any switchgear that is considered for spare capacity usage, but also has the necessary electrical components installed and is ready to supply power to a load (This excludes the outgoing power supply cable)
Spare-Unequipped-Circuit	A circuit identified in any switchgear that is considered for spare capacity usage, but does not have the necessary electrical components installed to supply power to a load.

Management and start up.

Management meetings

Title and purpose	Approximate time interval	Location	Attendance by:
Risk register and compensation events	Fortnightly	Eskom Academy of Learning	<i>Employer, Contractor, Supervisor, and Consultants</i>
Project Meetings	Weekly	Eskom Academy of Learning	<i>Employer, Contractor, Supervisor, and Consultants</i>
Stakeholder Forums	As required	Eskom Academy of Learning	<i>Employer, Contractor, Supervisor, and Consultants</i>

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

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or instructions under the contract as these shall be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

Documentation control

All contractual communications will be in the form of properly compiled letters or forms attached to e-mails and not as a message in the e mail itself. All of which will be copied to the Principal Agent/ Project Manager.

The Contractor will submit the following documents to the Employer for review, the Employer will review the documents for acceptance and inform the Contractor if the documents have been accepted or if it is not accepted and stating the reasons of not the accepting the documentation. The Employer will give the Contractor reasonable time which will be agreed to between the Contractor and the Employer to respond or re-submit the documents.

The documents are as follows:

Title and purpose	Frequency
Weekly plan	Every Monday of the week
Weekly progress report, reporting on actual work completed.	Every Friday of the week, reporting on the previous week's progress
Three weeks look ahead plan – detailing planned activity during the period	Monthly
Risk Register	Monthly
Permit to perform work related to civil engineering	When required

All correspondences of either commercial or technical nature, whether hard copy or email, either to Contractor or from Contractor shall clearly include the following information: contract number, subject matter, and document/ correspondence number.

All documents shall be drawn as specified by the Eskom Engineering Drawing Standard – Common Requirements, the document number is 240-8697350. In addition, a document list shall be delivered in Microsoft Excel format that contains the following fields: “document name”, “document type”, “version number”, “date created” and “created by”.

Configuration management

Documents Submission

All documents shall be submitted to the Eskom Documentation Centre. The *Contractor* is required to submit the Contractor Document Submission Schedule VDSS as per agreed dates to the Eskom Documentation Centre. Eskom will pre-allocate document numbers on the VDSS and send back to the *Contractor*. The VDSS is revisable, and changes must be discussed and agreed upon by all parties and properly documented. Changes in the VDSS can be additional documentation to be submitted, changes in submission dates or corrections in documentation descriptions, document numbers, etc. The Contractor Document Submission Schedule VDSS shall indicate the format of documents to be submitted. Eskom shall be responsible to manage the schedule i.e. creates a document register that will be used to track submission progress of documentation by the *Contractor* as per the committed dates on the VDSS.

Transmittal

The *Contractor* lists all project documents (soft copies and hard copies) for submittal on the transmittal with the following metadata fields:

- Title of the document
- Document Unique Identification number
- Revision number
- Name of Discipline
- Reason for issuing/submission
- Sender's detail
- Sent date
- Recipient's Details
- Date received
- Quantity of documentation referenced on the transmittal
- Number of copies
- Format/medium submitted (eg: paper, DVD, etc)
- Sender signature
- Recipient signature, once submitted, to acknowledge receipt

Identification of the Documentation

The *Contractor* ensures that document has the following as a minimum attribute on the cover page:

- Title of the document
- Document Unique Identification number (Eskom number)
- Contractor Document number, if applicable
- Document status
- Revision number
- Document Type
- Document security level
- Document revision table/history
- Page number on the footer
- Document Author/Authoriser/
- Document Originator Contractor

Document Headers

The header should include the project name, document title, document number, revision number and page number.

Drawings

The creation, issuing and control of all Engineering Drawings will be in accordance to the latest revision of 240-86973501 (Engineering Drawing Standards – Common Requirements) to be supplied as part of the enquiry documents.

General Requirement

The Contractor includes the Employer's drawing number in the drawing title block. This requirement only applies to design drawings developed by the Contractor and his Subcontractors. It does not apply to drawings developed by manufacturers for equipment and material such as valves, instruments, etc. Drawing numbers will be assigned by the Employer as drawings are developed.

Configuration Management Plan

The Contractor supplies a comprehensive configuration management program according to ISO 10007 (2nd Edition), and shall form part of deliverables for hand-over to the Employer.

Change Management

All Design change management shall be performed in in line with the Eskom Project Change Management Procedure (240-53114002) and the Employer ensures that Contractor is provided with latest revisions of this procedure.

Design Review Documentation

The Contractor conducts design reviews as per the Contractors official design review procedure. Contractor further takes note of the Employers Design Review Procedure (240-53113685 Rev 1) and participates in all design reviews as specified by the *Employer*. The *Employer* may "Accepted"; "Accept with Comments" or "Rejected". If required, the Contractor makes the necessary revisions on the documentation and ensures acceptance is obtained from Employer. The Contractor includes these design reviews as part of the schedule and suggests appropriate timing for such reviews.

Health and safety risk management

The *Contractor* shall comply with the health and safety requirements Attached to this tender

Environmental constraints and management

The *Contractor* shall comply with the environmental criteria and constraints

Quality assurance requirements

Quality Control

The Contractor shall control activities and processes in accordance with 240-105658000: Eskom Supplier Quality Management Specification (QM58)

The Contractor will be responsible for the verification and signing of the quality inspection / verification points by all parties, the records must be maintained by the Contractor and presented to Eskom on request.

General Quality Requirements to be used during the contract duration

The *Contractor* shall comply with the quality standard conditions as stipulated in section 3.8 of Supplier Quality Management Specification 240-105658000 (QM58) including but not limited to:

- a) The Contractor shall demonstrate, provide and maintain a Quality Management System (QMS) that is ISO 9001 compliant.
- b) The contractor shall develop and implement the Quality Method Statement and Contract Quality Plan (CQP).
- c) The Contractor agrees to control and professionally preserve and store appropriate documents , records and recordings to guarantee the traceability of the services rendered and inspection thereof;
- d) The delivered services shall be uniform in Quality and condition, consistent with good industry practices and adhere to requested Eskom requirements, without deviation.
- e) Eskom shall have the right to conduct surveys and perform surveillance of the Contractor's facilities.
- f) Eskom reserves the right to inspect any or all of the work. Verification by Eskom shall not absolve the Contractor of the responsibility to provide acceptable services, nor shall it preclude subsequent rejection by

- g) The services must comply with the agreed specifications and the applicable directives set out in the agreement. Defects notified by Eskom 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 scope of work, as signals of opportunities for improvement making process and other relevant changes to prevent recurrence
- h) The Contractor shall further identify potential problems before they occur by identifying deviations in patterns or trends in service or process performance.
- i) Nothing contained in the Contract shall relieve in any way the Contractor from the obligation of Quality control thereof.
- j) The Contractor guarantees that the quantity, Quality and outward appearance of the delivered services will comply with the requirements of the contract and/or relevant specifications.
- k) The Contractor shall prove its ability, on request, to relate to the proposed scope of work which establishes the manner in which the Contractor / Consultant intends to perform the Contract.
- l) The Contractor shall, on request, prove its organisational, logistics and support resources to ensure the requirements of the contract can be achieved.
- m) Eskom 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 / Consultant to confirm the Quality evaluation

Programming constraints

A programme showing the key activities is to be submitted with the tender documents or once appointed within two weeks showing the following:

- Provide Bar Chart outlining start and completion date for construction activities on site. All critical path items must be identified and outlined on the Bar Chart.

- The order and timing of operations which the *Contractor* plans in order to provide the works.

Strict adherence to the programme will be monitored and updated on a fortnightly basis to achieve the completion dates and submitted to Eskom Project Co-ordinator. Non-conformance to the stated programme will be liable for delay damages. Any deviations on time and cost are subject to Eskom approval.

Contractor's management, supervision and key people

The *Contractor* provides the *Employer* with a detailed organogram of all staff and management on the contract, showing their lines of authority / communication, within two weeks of contract award. This is revised monthly and reflects any changes to the staff and management structure. The *Employer* reserves the right to audit and verify the structure. The *Contractor* has a full-time Safety and Health Officers onsite

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* submits his claim as per the NEC Payment Certificate format with supporting Activity Schedule on the assessment day. The Contract Number must be clearly visible on the NEC Payment Certificate. The *Employer* assesses the Payment certificates on actual work completed. Any issues regarding the claim are addressed by the *Employer* to the *Contractor*.

On acceptance of the Payment Certificate by the *Employer* the *Contractor* submits his invoice as agreed upon with the *Employer*. Payment will take place as per the NEC Conditions of Contract.

In terms of core clause 50 the *Contractor* assesses the amount due and applies to the *Employer* for payment. The *Contractor* applies for payment with a tax invoice addressed to the *Employer* as follows:

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

- Name and address of the *Contractor* and the *Project Manager*
- The contract number and title;
- Contractor's VAT registration number;
- The Employer's VAT registration number 4740101508;
- The total Price for Work Done to Date which the Contractor has completed; excluding VAT, the VAT and the invoiced amount including VAT;
- Other amounts to be paid to the Contractor;
- Less amounts to be paid by or retained from the Contractor

The *Contractor* shall address the tax invoice to Eskom Holdings SOC Ltd

Email all invoices to: invoiceseskomlocal@eskom.co.za copies of all invoices shall be forwarded to the *Project Manager*

Insurance provided by the *Employer*

Contractor familiarises themselves with the Eskom Insurance Format A as provided in the Contract Data and make provision for all items that they are liable for.

Contract change management

The *Employer* instructs changes to the scope at any time, each instruction sets out the change and the date on which it becomes effective; and is issued to the *Contractor* in writing to be valid.

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.

Training workshops and technology transfer

Contractor shall provide training to Eskom's technical team on how the installed equipment and systems must be operated. This training must be recorded.

Engineering and the *Contractor's* design

The *Contractor* provides preliminary designs by registered engineers to the *Project Manager* for acceptance. These would have to be reviewed with possible amendments having to be made to comply with Eskom requirements. Adequate time is allowed for this. After acceptance of preliminary designs, the *Contractor* provides detailed designs.

***Employer's* design**

The *Employer* provides the following:

Eskom Academy of Learning (EAL) Fire Detection System Refurbishment Project Technical Specification
474-12515

All designs produced are reviewed for acceptance from the *Employer* as per the Eskom design review procedure (240-53113685). Acceptance of the design by the *Employer* does not release the *Contractor* from design liability.

The scope of work includes a survey, design, procurement, construction, manufacturing, installation, testing, commissioning and training for the existing Ziton FDS at EAL. This includes the Control and Indicating Equipment (CIE), power supply equipment, communication networks, detectors, alarm devices, cabling and 3rd party system interfaces. An overview of the premises and building is shown in Appendix A.

The scope includes the following:

- a) The *Contractor* uses a Professional Engineer to develop construction drawings etc. as well as site supervision
- b) Provide an inspection/assessment report of the current fire protection system stating the root cause and the required remedial works,
- c) Provide a proposal for the required works.
- d) Provide a design solution in line with the requirements of the technical specification.
- e) Design solutions are developed by a professional engineer at all design levels.
- f) Provide methodology for the design execution.
- g) Provide an integrated schedule for the construction period.
- h) Provide cost estimate for the full execution of the works.

Parts of the works which the *Contractor* is to design

- a) The *Contractor* provides a design solution in line with the requirements of the technical specification. Design solutions are developed by a professional engineer at all design levels.
 - Provide methodology for the design execution.
 - Provide an integrated schedule for the demolition, design and refurbishment period.
- b) Provide cost estimate for the full execution of the works.
- c) The design and refurbishment is completed in accordance with the *Contractor's* accepted detailed design.
- d) The *Contractor* constructs and erects the *works* in accordance with the *Contractor's* accepted design and takes cognisance of SANS 2001, SANS 10139 and SANS 1200.
- e) All *works* are designed for constructability, reliability, and maintainability.
- f) The *Contractor* designs and procures all construction material and equipment required to perform the *works*.
- g) The *Contractor* identifies and includes all items required to form a complete, reliable, fit for purpose operating *works*, which complies with the requirements as stipulated in this Works Information.
- h) The *Contractor* provides all engineering calculations, drawings (hard and soft copy) models, inspection/quality reports, construction records, commissioning test reports, and other documentation as required by the scope of works.
- i) The *Contractor* provides dimensioned general arrangement drawings of the designed remedial works and detailed drawings of all components of the *works*, sufficiently detailed for the preparation of maintenance and operating procedures.
- j) The *Contractor* supplies drawings and documentation as specified in the Works Information. This includes, but is not limited to, GA drawings, fabrication drawings, construction drawings, as built drawings, maintenance and operating manuals for the fabrication and installation of the *works*.
- k) The *Contractor's* appointed *Professional Engineer* provides technical oversight during fabrication and construction.
- l) Other Plant and Materials or items associated with this *works* is utilised with prior approval from the *Project Manager*.
- m) The *Contractor* performs Factory Acceptance Testing (FAT) and Site Acceptance Testing (SAT) of the Plant and Materials.
- n) The *Contractor* designs and provides all falsework and formwork and any other necessary temporary works for the safe execution of the *works*.

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

The following process will be followed during submission of documents:

- a. The *Contractor* submits the documents/drawings to the *Employer*

- b. The *Employer's* Document Controller registers the documents.
- c. The *Employer's* Document Controller will supply the documents/drawings to all relevant parties within the *Employer's* project team.
- d. The *Employer's* project team reviews the documents/drawings and will submit all comments or inputs to the Contractor for consideration.
- e. If the *Employer* finds major deficiencies in the submitted documents/drawings, the *Contractor* revises the documents/drawings and resubmits to the *Employer*.
- f. The *Employer* reviews the documents/drawings and if no major deficiencies are found, the *Contractor* organises a Design Review session.
- g. The *Employer* and the *Contractor* conduct a Design Review.
- h. If any fundamental errors were found in the designs or further actions are required, the *Contractor* record all concerns raised and revises the designs.
- i. The *Contractor* organises a Design Review session once all designs were revised according to the concerns raised by the *Employer*.
- j. If no fundamental errors were found in the designs during the Design Review session, the *Contractor* compiles the Design Review minutes or report and submits it to the *Employer*
- k. The *Employer's* Document Controller registers the report.
- l. The *Employer's* project team reviews the *Contractor* report/minutes. If the report/minutes are not acceptable, the *Contractor* revises the report/minutes and resubmits to the *Employer's* Agent.
- m. The *Employer's* Agent will accept the *Contractor* design once the report/minutes are accepted by the *Employer's* project team.
- n. *Work* shall at all times be subject to full time supervision by a qualified and experienced site agent. This representative must be authorised and competent to receive instructions on behalf of the *Contractor*.

The following documents are supplied to the *Employer* by the *Contractor* as a minimum:

- Detail Design
- Detail design report
- Coordination between services
- Detail design drawings, including structural steel connection/joining details. Dimensioned detail drawings showing proposed method of fixing and welding together of all the components
- Detailed programme for the works in sufficient detail as to represent the units of work to enable the representative to assess the progress of the works
- Proposed corrosion protection systems, including data sheets for coating all the steel columns
- Detailed structural sections for complete roof refurbishment work
- Detailed maintenance, reliability, control and operating philosophies
- Testing, balancing and commissioning procedures
- Plant and material acceptance testing

Other requirements of the *Contractor's* design

The *Contractor* is to comply with all legislated safety requirements as well as *Eskom's* health and safety standards.

Use of *Contractor's* design

The *Contractor* grants to the *Employer*, with effect from the starting date, an irrevocable royalty-free non-exclusive licence to use all of the documents provided to provide the Works (including, but not limited to calculations, drawings, manuals, models and other documents of a technical nature), for any purpose whatsoever, including for the purpose of operating, repairing, maintaining, dismantling, re-assembling and making adjustments to all parts of the *Works*.

Design of Equipment

The minimum general components design criterion that is to be met is as follows:

- a. The components are to be designed to facilitate efficient manufacture, inspection, transportation, installation, maintenance, cleaning and repairs.
- b. The components are to be designed to ensure safe and satisfactory operation for a life expectancy of at least 10 years under the conditions prevailing at Eskom Academy of Learning.
- c. The components are to be designed to prevent undue stresses being produced by expansion and contraction due to temperature change and other local natural and manmade conditions.
- d. The components are to be designed to keep maintenance costs to a minimum.
- e. The components are to be designed to comply with all the legal requirements in respect of safety and the prevention of environmental pollution.
- f. The components are to be designed to satisfy any specific requirements contained in the relevant statutory codes and standards.
- g. The components are to be designed for operation of 365 days per annum, 24hrs per day.
- h. The components are to be designed such that all material from which the components are manufactured from is compatible with the intended duty and service conditions. All components are suitable treated and protected from corrosion.
- i. Equipment and components shall be new, and shall represent the manufacturer's current product range unless otherwise specified. The materials, appliances, equipment and devices shall be tested and listed by the Eskom labelling standards.
- j. Equipment and components shall be installed in strict compliance with manufacturer's recommendations. The manufacturer's installation manuals for conductor specifications, wiring diagrams, schematics, physical equipment sizes, etc. shall be perused before commencing with procurement.
- k. All equipment shall be labelled by means of a unique numbering system for ease of identification and fault locating.
- l. All wiring and cabling shall be marked with cable markers similar to Grafoplast. Each individual conductor shall be uniquely numbered. The same number shall appear at both ends of each conductor. Wiring numbers shall appear on all as-built drawings.
- m. If any material or workmanship is not to the satisfaction of the engineer, it will be rectified and/or replaced at the sub- contractors cost and all rejected material will immediately be removed from the site. The contractor is responsible for the correct and complete erection of the installation and inspections do not exempt the contractor of this obligation.

Equipment to be included in the *works*

The *Contractor* is required to provide *Equipment* required for the execution of the complete *Works* as detailed by the scope of work.

As-built drawings, operating manuals and maintenance schedules

The operating and maintenance manuals are to be detailed enough to operate, maintain, dismantle, reassemble, adjust and repair all newly installed materials.

As-built Drawings

The *Contractor* is to provide "As Built" drawings based on the shop drawings embodying all modifications made during construction. Safety and operation drawings must also be included ". Two hard copies (A1 size) as well as PDF copies saved on a memory stick - of "As Built" drawings are to be submitted to the *Employer* for *Acceptance*

Procurement

The Contractor provides the following procurement services in performing the *works*:

- Preparation of Employer approved supplier and Sub-Contractor's lists for equipment and contracts to be submitted to the *Employer* for review and approval.
- Follows the least cost and time saving procurement strategies.
- Contract management services for the selection, appointment and management of Sub-Contractors, where required to execute the scope.
- Obtains delivery dates from Sub-Contractors and suppliers in order to realize the Completion Date;
- Receiving of invoices, verification thereof in terms of purchase orders and contract provisions, certification of invoices as being correct and payable and supply of correct invoices to the *Employer* within.
- Management of and negotiating of all suppliers and Sub-Contractors compensation events and recommendations to the Employer as to the validity, amount and payment of such events.
- Determination of penalties payable by suppliers and Sub-Contractors and recommendation to the *Employer* as to the enforcement of such penalties prior to any communication to suppliers and Contractors.
- Ensuring that all suppliers and Sub-Contractors, from whom the *Contractor* procures equipment and materials do not retain, encumber or reserve title to such items.

People

Minimum requirements of people employed on the Site

- All Contractors personnel are subjected to access control conditions as per Eskom requirements.
- All contractors' personnel are to receive Eskom Induction prior to accessing the site.
- All workers employed on site comply with Eskom's health and safety standards.
- Workers are not allowed to be transported on the back of vans or bakkies.
- Workers are restricted to the area of activity in close proximity to the construction/refurbishment area.
- The Contractor recruits within the immediate District Municipality for general labour/ skills to execute the project.

BBBEE and preferencing scheme

Contractors has a minimum BBBEE Level 4 rating.

Accelerated Shared Growth Initiative – South Africa (ASGI-SA)

Not applicable for this Contract

Subcontracting

Preferred subcontractors

The *Contractor* notifies the *Project Manager* in the event of using any Sub-contractor and provides the *Project Manager* with a list of all sub-contractors on the project. Subcontractors cannot subcontract work to another subcontractor. The choice of the proposed sub-contractor is subject to the *Project Manager's* approval before using the services of such subcontractor. The Subcontractor must be familiar with the required work and should submit CV's of past experience and have the necessary statutory accreditations.

The *Contractor* provides the *Project Manager* with the Health and Safety plans of all the sub-contractors on the project, before commencing the project.

The *Contractor* coordinates his activity with other subcontractors who would be directly employed by the *Employer* for parts of the work not included in the scope of work

Subcontract documentation, and assessment of subcontract tenders

The *Contractor* uses the NEC subcontractor agreements. All subcontractor quotations for which provisional sums or budgets have been allowed, is first approved by the *Employer* or his representative with documentary proof. This is done well in advance of the planned scheduling of the work.

Limitations on subcontracting

As per Eskom requirements, subcontracting will be limited to 30% as far as possible. The *Employer* is notified where subcontracting exceeds the 30% threshold prior to commencement of the specific subcontracting works.

Attendance on subcontractors

The contractor attends to the activities of all subcontractors including direct subcontractors.

Plant and Materials

Quality

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

Only components of high reliability will be utilised, with a proven operating history, to enable the buildings to achieve required reliability and availability. Material design, engineering and manufacture will accord with the best modern practice applicable to high-grade products of the type to be furnished, so as to ensure the efficiency and reliability of the *Works* and the strength and suitability of the various parts for the *Works*.

Materials shall 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 materials will be permitted without the *Project Manager's Acceptance* and any such repair, if Accepted, will be carried out to the satisfaction of the *Employer*.

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 working days prior to the activity.

Typical hold points are listed below:

- a. Design Review
- b. Factory Acceptance Test
- c. Delivery to Site
- d. Erection
- e. Site Acceptance Test
- 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 *Acceptances*
- b. Type and routine test certificates
- c. Construction (and as-built) drawings and *Acceptances*

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. If controlled copies of these documents have been submitted to the *Employer*, then the controlled copy numbers may be quoted in the submission.

The *Contractor* adheres to:

Vendor Document Submittal Schedule (the schedule to be issued to the Contractor by the Employer)

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

None, all Materials are to be provided by the *Contractor*.

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

The *Contractor* takes all necessary steps to ensure that all Materials are adequately protected against damage during shipping, transport and storage.

Hoarding should be provided / erected around all material stored on site

Spares and consumables

None – no spares required

Tests and inspections before delivery

The *Employer* carries out quality inspections at his own discretion.

The *Employer* will inspect and approve stages of manufacture of all Materials necessary to ensure the correct quality of Materials as prescribed in the accepted project quality plan.

All inspections and testing are to be performed in accordance with the Quality Control Procedure (QCP) developed by the *Contractor* after *Acceptance* by the *Employer*.

The *Employer* reserves the right to reject items that do not conform to the *Employer's* requirements.

The following tests are conducted by the *Contractor* and are to be witnessed by the *Employer* at the manufacturer's *works* or *Contractor's* premises as a minimum requirement:

- a. Verification that all components installed are correct.
- b. Verification that all labels are correct.
- c. Site integration test as per SANS 10139

Marking Plant and Materials outside the Working Areas

All Material paid for by the *Employer* is clearly labelled as being the *Employer's* property.

***Contractor's* Equipment (including temporary works).**

The *Contractor* provides the following in order to complete the *works*:

- a. All scaffolding required
- b. Any *Equipment* necessary to complete the *works*
- c. Lifting facilities
- d. All material to be used for hoarding purposes

ESKOM HOLDINGS SOC Ltd

CONTRACT NUMBER _____

THE SUPPLY AND INSTALLATION OF FIRE PROTECTION SYSTEM AT MAIN & SECURITY BUILDINGS AT ESKOM ACADEMY OF LEARNING

The *Contractor* supplies, installs, maintains and removes all temporary construction facilities and utilities necessary to Provide the Works.

Construction

Temporary works, Site services & construction constraints

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

The site is located in a part of an existing campus, with existing buildings all around, some buildings are currently occupied.

1. The *Contractor* attends the **Compulsory site meeting** prearranged by the *Employer* prior to submitting tender.
2. The *Contractor* to ensure that he familiarizes himself with site conditions.
3. *Contractor* access is limited to the Main Building area and *Contractor's* staff is prohibited from roaming in the rest of the facility.
4. Eskom Holdings indemnifies themselves from any negligent events by the *Contractor* relating to the scope of the works within the contract period
5. The *Contractor*, his staff and the Sub-contractors maintain identification at all times e.g. Uniforms etc.
6. The *Contractor* is deemed to execute Safety Procedures to ensure the safety of his staff, Sub-contractors, Eskom staff during the Contract Period.
7. Use of power and loud tools to be controlled and/or managed with Eskom office management team.
8. The safety of the *Contractors Employees*, Subcontractors and building's tenants takes preference over the scope of the works of this project.
9. All site instructions to be approved and authorised in writing by the *Project Manager*. If this directive is not adhered to it could result in non-payment.

Access to the site

1. The *Employer* provides the *Contractor* with an Access Certificate to formally provide access to the site.
2. The *Contractor* ensures that he is familiar with conditions of access to the building, which includes constraints to damaged access road, limited parking and no goods lift is available.
3. The *Contractor* adheres to all the requirements which include, but not restricted to:
 - a. Identity cards with photographs
 - b. Cooperation in order to help Eskom provide the customer with a project schedule reflecting the period during which the construction and commissioning activities will take place.
4. The *Contractor* will be responsible for external disputes which may occur with regard to the *works*.
5. The *Contractor* is when necessary or needed, required to make all the necessary arrangements with the Local Authorities via the Building Manager and or Eskom Representative.

Restrictions to access on Site, roads, walkways and barricades

Stated above.

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

Working after normal working hours and on weekends requires special permission. The Contractor shall give the *Employer* adequate notice if this is planned.

Health and safety facilities on Site

Refer to SHE specifications issued.

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

The *Contractor* will ensure that all fauna and flora is preserved and protected during his activity on site. All such fauna and flora will be reinstated after completion of the work.

Title to materials from demolition and excavation

None.

Cooperating with and obtaining acceptance of Others

The Main Building is a stand-alone building on the site, therefore access onto this area does not require any coordination with other Contractors on site. The building / site is currently vacant but access into certain parts of the building will have to be pre-arranged and agreed upon beforehand.

Publicity and progress photographs

The *Contractor* requests approval from *Project Manager* for any photography and progress photographs prior to undertaking.

***Contractor's* Equipment**

The *Contractor* keeps an inventory of equipment brought to site. This is verified and acknowledged by Eskom security to allow removal of such equipment when required by the contractor.

Security of materials on sites:

- The *Contractor* provides own security on site and is held liable for excess of insurance in case of theft or loss.

Material and Bill of Quantities

- Storage and security of material is the responsibility of the *Contractor* until the Final Completion Certificate is certified. The *Contractor* is responsible for all costs involved to expedite lost, damaged or stolen material.

Equipment provided by the *Employer*

The *Contractor* provides all equipment and tools required to complete the *works*.

Site services and facilities

The *Employer* will provide power and water,

The *Contractor* shall make provision of waste disposal, and submit proof in a form of Waste Disposal Certificates to the Employer for approval

The *Contractor* shall provide everything else necessary for providing the Works.

Facilities provided by the *Contractor*

A clearly demarcated site establishment area will be provided by the *Contractor* for the following:

- Suitable facilities for *Contractor* to store all material and equipment
- Suitable facilities for his employees for changing
- Facilities for the consumption of food

- Site offices
- Toilet/Ablution facilities
- Other temporary facilities required by the *Contractor*

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

There are no buildings in close proximity to the Main Building on site
Contractor is to investigate existence of any services before commencement of work

Survey control and setting out of the *works*

It is the *Contractors* responsibility to ensure accuracy when performing setting out of the *works*,
The *Contractor* shall provide adequate fastening to existing connection points.

Excavations and associated water control

Where excavation is required, the *Contractor* takes the necessary precautions not to damage any existing services

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

The *Contractor* is required to conduct Scanning to determine the existing services in the ceiling voids and provide this information as As-Build drawings to the *Employer*

Control of noise, dust, water and waste

The Contractor takes all precautions necessary to prevent any noise and dust whilst carrying out the work.

Sequences of construction or installation

N/A.

Giving notice of work to be covered up

All communication shall be in writing

Hook ups to existing works

Contractor stipulates methodology for hooking-up when working in heights and provides notification to the SHE Officer in advance and obtain permission to proceed. The *Contractor* cannot not hook up for lifting, supporting or for any other reason to any position or existing works in the plant without a written approval by the *Project Manager*.

Completion, testing, commissioning and correction of Defects

Work to be done by the Completion Date

The following is mandatory.

The contract is deemed to be complete when the following have been completed in accordance with the scope of work:

- a. Signed safety clearance certificates have been submitted.
- b. The final as-built drawings have been submitted.
- c. All documentation has been submitted including testing reports and the associated certificates received.
- d. All Quality Control Plan (QCP) documentation received.
- e. Technical, Operating, Maintenance manuals have been delivered.
- f. All documentation *and* as-built drawings are labelled.

Use of the *works* before Completion has been certified

N/A

Materials facilities and samples for tests and inspections

The *Contractor* provides all Materials, facilities and/or samples required for tests and inspections.

The *Employer* reserves the right to call for samples of the Equipment offered to inspect the workmanship as the work proceeds and to either accept or reject the Equipment or workmanship.

The *Employer's* Acceptance of the workmanship or Equipment must in no way reduce the *Contractor's* liability to provide complete buildings.

The purpose of these inspections is to reduce the risk of non-compliant Equipment and *Materials* being transported to site. The presence of the *Employer* at the inspections does not reduce the *Contractor's* responsibility to comply with the contract.

The *Contractor* is to make arrangements that these inspections are carried out within the boundaries of South Africa. Should any tests or inspections be required outside of the Gauteng Area, the *Contractor* is to allow in his Tender price for all costs (travel, accommodation, subsistence, etc) for two persons to attend such tests or inspections. Accommodation and subsistence arrangements are to be submitted to the *Employer* for *Acceptance* in writing

Commissioning

Commissioning shall be done after Completion

Start-up procedures required to put the *works* into operation

No alterations or adjustments will be made to the *Works* after functional checks are done without the *Employer's* written permission.

At this stage the following must have been achieved:

- a. Installation and pre-commissioning completed.
- b. Testing report and the associated certificates received.
- c. Signed erection and safety clearance certificates received.
- d. Final Draft of the Technical, Operating, Maintenance manuals delivered.
- e. All Quality Control Plan (QCP) documentation received.

Take over procedures

The *Employer* takes over the *Works* on *Completion Date* of the Accepted Program.

Access given by the *Employer* for correction of Defects

The *Project Manager* arranges the date and access to site for the *Contractor* to correct defects. The *Contractor* updates the site safety file and the records contained inside as per construction regulations. The *Contractor* will be responsible for ensuring that the area is barricaded before correcting any defects

Training and technology transfer

After Completion of the contract, the *Contractor* is required to provide training and transfer system knowledge to the building owner/manager by submitting documented Design Intent, As-built drawings, Operational and Maintenance Manual, Commissioning Records, Commissioning Report and by providing training on all the systems to the building management staff to ensure that they have all the information and understanding needed to operate and maintain the features and systems in the building.

The *Contractor* is to provide on-site training and training material to the Engineers, Operators and Maintenance personnel prior to taking-over of the *works*. The training will preferably be offered during the commissioning and testing for a minimum of ten (10) personnel. The *Contractor* will, prior to handing over of the *works*, satisfy the *Employer* or authorized representative that maintenance and operational personnel are competent and adequately trained to maintain and operate the Plant and Materials supplied.

The training is to cover the following, however not limited to:

- a. Information provided in the design intent report (including energy/environmental features)
- b. Review of controls set up, programming, alarms and troubleshooting
- c. Measures that can be taken to optimise energy efficiency
- d. Occupational health and safety (OH&S) issues
- e. Maintenance requirements and sourcing replacements
- f. Obtaining and addressing occupant satisfaction feedback

Steps for Conducting On-site Training are to include, but not limited to:

- a. Preparation
- b. Introduction
- c. Explanation
- d. Demonstration
- e. Practice Under Supervision
- f. Conclusion

The operating and maintenance manual must be available during the training of site staff. Site staff must also be made familiar with the contents of that manual.

Operational maintenance after Completion

N/A

Plant and Materials standards and workmanship

Refer to Technical Specification document - 474-12515

Investigation, survey and Site clearance

N/A

Civil engineering and structural works

Refer to Technical Specification document - 474-12515 Section 3.5

Codes and Standards

The design complies with the following codes and standards

GENERAL

The latest edition, including all amendments up to date of tender of the following specifications, publications and codes of practice shall be read in conjunction with this specification and shall be deemed to form part thereof:

- Occupational Health and Safety Act 85 of 1993 and regulations as amended

Compulsory standards:

- SANS 10139 Fire Detection and Alarm Systems for Buildings - Latest Revision

Applicable National Standards

Fire Detection and Alarm System (FDS)

- SANS 10139 Fire Detection and Alarm Systems for Buildings – System Design, Installation and Servicing
- 240-54937439 Fire Protection / Detection Assessment Standard
- 240-56737448 Fire Detection and Life Safety Design Standard
- 240-54937450 Fire Protection and Life Safety Design Standard
- 240-56737654 Inspection, Testing and Maintenance of Fire Detection Systems Standard
- 240-54937454 Inspection Testing and Maintenance of Fire Protection Systems Standard
- All parts of EN54 / SANS 50054 standards referenced in SANS 10139
- EN 54-1 Fire detection and fire alarm systems, Part 1: Introduction
- EN 54-2 Fire detection and fire alarm systems, Part 2: Control and indicating equipment
- EN 54-3 Fire detection and fire alarm systems, Part 3: Sounders
- EN 54-4 Fire detection and fire alarm systems, Part 4: Power supply equipment
- EN 54-5 Fire detection and fire alarm systems, Part 5: Heat detectors – Point detectors
- EN 54-7 Fire detection and fire alarm systems, Part 7: Smoke detectors – Point detectors using scattered light, transmitted light or ionisation.
- EN 54-10 Fire detection and fire alarm systems, Part 10: Flame detectors – Point detectors.
- EN 54-11 Fire detection and fire alarm systems, Part 11: Manual call points.
- EN 54-12 Fire detection and fire alarm systems, Part 12: Smoke detectors – Line detectors using an optical light beam
- EN 54-13 Fire detection and fire alarm systems, Part 13: Compatibility assessment for system components.
- EN 54-14 Fire detection and fire alarm systems, Part 14: Guidelines for planning, design, installation, commissioning, use and maintenance.

- EN 54-17 Fire detection and fire alarm systems, Part 17: Short-circuit isolators.
- EN 54-18 Fire detection and fire alarm systems, Part 18: Input and output devices.
- EN 54-20 Fire detection and fire alarm systems, Part 20: Aspirated smoke detectors.
- EN 54-21 Fire detection and fire alarm systems, Part 21: Alarm transmission and fault warning routing equipment.
- EN 54-22 Fire detection and fire alarm systems, Part 22: Resettable line type heat detectors.
- EN 54-23 Fire detection and fire alarm systems, Part 23: Fire alarm devices – Visual alarm devices.
- EN 54-25 Fire detection and fire alarm systems, Part 25: Components using radio links.
- EN 54-26 Fire detection and fire alarm systems, Part 26: Point fire detectors using carbon monoxide sensors.
- EN 54-27 Fire detection and fire alarm systems, Part 27: Duct smoke detectors.
- EN 54-28 Fire detection and fire alarm systems, Part 28: Non-resettable line type heat detectors.
- EN 54-29 Fire detection and fire alarm systems, Part 29: Multi-sensor fire detectors – Point detectors using a combination of smoke and heat sensors.
- EN 54-30 Fire detection and fire alarm systems, Part 30: Multi-sensor fire detectors – Point detectors using a combination of carbon monoxide and heat sensors.
- EN 54-31 Fire detection and fire alarm systems, Part 31: Multi-sensor fire detectors – Point detectors using a combination of smoke, carbon monoxide and optionally heat sensors.

HMI and Network

- 240-56355728 Human Machine Interface Design Requirements Standard.
- 240-129014618 Generation Cyber Security Compliance Guideline.

Electrical

- SANS 10142 The wiring of premises Part 1: Low-voltage installations.
- 240-56227443 Requirements for Control and Power cables for Power Stations Standard. (Also applicable to ERE premises in some instances)
- 240-51999453 Valve Regulated Lead Acid Battery Standard.
- 240-56360086 Ni-Cad Battery Standard

Hazardous Locations

- SANS 10108 The classification of hazardous locations and the selection of equipment for use in such locations.
- SANS 60079 Explosive Atmospheres.
- 240-56536505 Eskom HAZLOC Standard.
- 240-69166135 Classification of Hazardous Locations.

Civils

- 240-56364545 - Structural Design and Engineering Standard

C3.2 *CONTRACTOR'S* WORKS INFORMATION

3.2.1. *Contractor's* design

3.2.2. Plant and Materials specifications and schedules

3.2.3. Other

PART 4: SITE INFORMATION

Document reference	Title	No of pages
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PART 4: SITE INFORMATION

Description of the Site and its Surroundings

General description

The Eskom Academy of Learning (EAL) is built on 105 hectares of land and surrounded by a 3.9km radius High Security Mesh Fence perimeter. There are 39 buildings on site, which cater for diverse business operations specializing in among others, training and development, conferencing, hospitality, Information and Communication Technology, accommodation and business office environment. The Fire system within the entire Eskom academy of Learning (EAL) requires refurbishment for it to be in line with current operations and regulatory standards. This project focuses mainly on the Main Building as well as Security Building.

Existing buildings, structures, and plant & machinery on the Site

The actual construction area can only be accessed from the main gate, and the Main building is situated away from other buildings on site. Every effort must be made to protect the property, belongings and vehicles on site. All electrical work on site whether part of the roof refurbishment or not, must be assumed as currently operational and appropriate care and protection must be erected around them for protection. Every attempt must be made to ensure the health and safety of Eskom staff and its environment during the construction process as well as the least possible disruption to Eskom staff activity.

Hidden services

All services whether underground or above ground/on the roof shall be verified and confirmed by the contractor before starting with the work. This shall also be discussed with the project team to plan accordingly and confirm before starting with the work.

