NEC3 Engineering & Construction Contract

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

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

Provision of Cable Spreading Area Passive Fire Protection at Matla Power Station for a period of 3 years on as and when required basis.

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 *Employer***	**[●]**
C1.2b	**Contract Data provided by the *Contractor***	**[●]**
	[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:

Provision of Cable Spreading Area Passive Fire Protection at Matla Power Station for a period of 3 years on as and when required basis.

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

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

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

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

Signature(s) .....

Name(s) .....

Capacity .....

For the tenderer: .....

(Insert name and address of organisation)

Name & signature of witness ..... Date .....

Tenderer's CIDB registration number (if applicable) .....

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

Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

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

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

Signature(s) .....

Name(s) .....

Capacity .....

for the Employer .....

(Insert name and address of organisation)

Name & signature of witness ..... Date .....

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

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

Note:

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

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

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

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

	For the tenderer:	**For the Employer**
Signature		
Name		
Capacity		
On behalf of	*(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*

Clause	Statement	Data
1	**General**	
	The *conditions of contract* are the core clauses and the clauses for main Option	
		A: **Priced contract with activity schedule**
	dispute resolution Option	**W1:** **Dispute resolution procedure**
	and secondary Options	
		X1: **Price adjustment for inflation**
		X2 **Changes in the law**
		X5: **Sectional Completion**
		X7: **Delay damages**
		X16: **Retention**
		X18: **Limitation of liability**
		Z: ***Additional conditions of contract***
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The *Employer* 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 *Project Manager* is: (Name)	**To be advised**
	Address	**Matla Power Station** **Private Bag X5012** **Kriel** **2271**
	Tel	**To be advised**
	Fax	**To be advised**
	e-mail	**To be advised**
10.1	The *Supervisor* is: (Name)	**[●]**

	Address	**[●]**
	Tel No.	**[●]**
	Fax No.	**[●]**
	e-mail	**[●]**
11.2(13)	The *works* are	**Provision of Cable Spreading Area Passive Fire Protection at Matla Power Station for a period of 3 years on as and when required basis.**
11.2(14)	The following matters will be included in the Risk Register	**Outage movement/Dependant** **Contractor may be required to work 24 hours and weekends**
11.2(15)	The *boundaries of the site* are	**Unit 1 -6 Cable Spreading Areas as described in the scope of work**
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 *law of the contract* is the law of	**the Republic of South Africa**
13.1	The *language of this contract* is	**English**
13.3	The *period for reply* is	**3 working days after notification**
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 *completion date* for the whole of the *works* is	**TBC**

11.2(9)	The *key date*s and the *condition*s to be met are:	***Condition* to be met**		***key date***
		1	**U1 Cable spreading**	**As per accepted programme for all sections**
		2	**U2 Cable spreading**	
		3	**U3 Cable spreading**	
		4	**U4 Cable spreading**	
		5	**U5 Cable spreading**	
		6	**U6 Cable spreading**	

30.1	The *access dates* are:	**Part of the Site** **TBA**
31.1	The *Contractor* is to submit a first programme for acceptance within	**Two weeks after the award Contract Date.**
31.2	The *starting date* is	**To be advised**
32.2	The *Contractor* submits revised programmes at intervals no longer than	**2 days during the outage**
35.1	The *Employer* is not willing to take over the *works* before the Completion Date.	N/A
4	**Testing and Defects**	
42.2	The *defects date* is	**52 weeks after Completion of the whole of the *works*.**
43.2	The *defect correction period* is	**1 day after notification except in those circumstances where defect correction is not practical in such a period, in which case the defect shall be corrected by the contractor within such time as mutually agreed by both parties**
5	**Payment**	
50.1	The *assessment interval* is	**between the 25 day of each successive month.**
51.1	The *currency of this contract* is the	**South African Rand.**
51.2	The period within which payments are made is	**30 days after date of invoice**
51.4	The *interest rate* 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 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**	

60.1(13)	Assumed values for the ten year return *weather data* for each *weather measurement* for each calendar month are:	**As stated in Annexure A to this Contract Data provided by the *Employer*.**
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.**
8	**Risks and insurance**	
80.1	These are additional *Employer*'s risks	**1. N/A**
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.**
10	**Data for main Option clause**	
A	**Priced contract with activity schedule**	**There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.**
11	**Data for Option W1**	
W1.1	The *Adjudicator* is	**the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).**
	Address	**To be advised when a dispute arises**
	Tel No.	**To be advised when a dispute arises**
	Fax No.	**To be advised when a dispute arises**
	e-mail	**To be advised when a dispute arises**
W1.2(3)	The *Adjudicator nominating body* 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 *tribunal* is:	**arbitration.**
W1.4(5)	The *arbitration procedure* is	**the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.**
	The place where arbitration is to be held is	**[●] South Africa**

	The person or organisation who will choose an arbitrator - if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is	**the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.**

12 Data for secondary Option clauses

X1 Price adjustment for inflation

X1.1(a) The *base date* for indices is **TBC**

X1.1(c) The proportions used to calculate the Price Adjustment Factor are:

	proportion	**linked to index for**	**Index prepared by**
	0. [●]	**[●]**	**[●]**
	0. [●]	**[●]**	**[●]**
	0. [●]	**[●]**	**[●]**
	0. [●]	**[●]**	**[●]**
	0. [●]	**[●]**	**[●]**
	15%	**non-adjustable**	
Total	**100%**		

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 *completion date* for each *section* of the *works* is:

Section	**Description**	***Completion date***
1	**U1**	**As per agreed program**
2	**U2**	**As per agreed program**
3	**U3**	**As per agreed program**
4	**U4**	**As per agreed program**
5	**U5**	**As per agreed program**
6	**U6**	**As per**

				agreed program
X5 & X7	**Sectional Completion and delay damages used together**			
X7.1 X5.1	Delay damages for late Completion of the *section*s of the *works* are:	***Section***	**Description**	**Amount per day**
		1	**U1**	**2% of the total value per day up to a maximum of 10% of order**
		2	**U2**	
		3	**U3**	
		4	**U4**	
		5	**U5**	
		6	**U6**	
	Remainder of the *works*			
	The total delay damages payable by the *Contractor* does not exceed:	**10% of the total contract Price**		
X16	**Retention (not used with Option F)**			
X16.1	The *retention free amount* is	**Zero**		
	The *retention percentage* is	**10% of the contract price**		
X18	**Limitation of liability**			
X18.1	The *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to:	**R0.0 (zero Rand)**		
X18.2	For any one event, the *Contractor*'s liability to the *Employer* for loss of or damage to the *Employer*'s property is limited to:	**the amount of the deductibles relevant to the event**		
X18.3	The *Contractor*'s liability for Defects due to his design which are not listed on the Defects Certificate is limited to	**The greater of** • **the total of the Prices at the Contract Date and** • **the amounts excluded and unrecoverable from the *Employer*'s assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus the applicable deductible as at contract date.**		

X18.4	The *Contractor*'s total liability to the *Employer* 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 Z15 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

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

Z9 *Employer's* limitation of liability

Z9.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)

Z9.2 The *Contractor*'s entitlement under the indemnity in 83.1 is provided for in 60.1(14) and the *Employer*'s liability under the indemnity is limited.

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

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

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

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

Z12 Ethics

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

Affected Party means, as the context requires, any party, irrespective of whether it is the *Contractor* or a third party, such party's employees, agents, or Subcontractors or Subcontractor's employees, or any one or more of all of these parties' relatives or friends,

Coercive Action means to harm or threaten to harm, directly or indirectly, an Affected Party or the property of an Affected Party, or to otherwise influence or attempt to influence an Affected Party to act unlawfully or illegally,

Collusive Action means where two or more parties co-operate to achieve an unlawful or illegal purpose, including to influence an Affected Party to act unlawfully or illegally,

Committing Party means, as the context requires, the *Contractor*, or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractor or the Subcontractor's employees,

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

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

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

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

Z12.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.

Z12.2 The *Employer* may terminate the *Contractor*'s obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Contractor* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Employer* has. It is not required that the Committing Party had to have been found guilty, in court or in any other similar process, of such Prohibited Action before the *Employer* can terminate the *Contractor*'s obligation to Provide the Services for this reason.

Z12.3 If the *Employer* terminates the *Contractor*'s obligation to Provide the Services for this reason, the amounts due on termination are those intended in core clauses 92.1 and 92.2.

Z12.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Employer* does not have a contractual bond with the Committing Party, the *Contractor* ensures that the Committing Party co-operates fully with an investigation.

Z13 Insurance

Z 13.1 Replace core clause 84 with the following:

Insurance cover 84

84.1 When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.

84.2 The *Contractor* provides the insurances stated in the Insurance Table A.

84.3 The insurances provide cover for events which are at the *Contractor*'s risk from the *starting date* until the earlier of Completion and the date of the termination certificate.

INSURANCE TABLE A

Insurance against	Minimum amount of cover or minim limit of indemnity
Loss of or damage to the *works*, Plant and Materials	The replacement cost where not covered by the *Employer*'s insurance The *Employer*'s policy deductible, as Contract Date, where covered by the *Employer*'s insurance
Loss of or damage to Equipment	The replacement cost
Liability for loss of or damage to property (except the *works*, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor*) caused by activity in connection with this contract	Loss of or damage to property *Employer*'s property The replacement cost where not covered by the *Employer*'s insurance The *Employer*'s policy deductible, as Contract Date, where covered by the *Employer*'s insurance Other property The replacement cost Bodily injury to or death of a person The amount required by applicable l
Liability for death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with this contract	The amount required by the applicab law

Z 13.2 **Replace core clause 87 with the following:**
The *Employer* provides the insurances stated in the Insurance Table B.

INSURANCE TABLE B

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

Z14 Nuclear Liability

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

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

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

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

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

Z15 Asbestos

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

AAIA	means approved asbestos inspection authority.
ACM	means asbestos containing materials.
AL	means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.
Ambient Air	means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.
Compliance Monitoring	means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
OEL	means occupational exposure limit.
Parallel Measurements	means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
Safe Levels	means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
Standard	means the *Employer*'s Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.
SANAS	means the South African National Accreditation System.
TWA	means the average exposure, within a given workplace, to airborne asbestos fibres, normalised to the baseline of a 4 hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.

Z15.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.

Z15.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor*'s expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z15.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.

Z15.3 The *Employer* manages asbestos and ACM according to the Standard.

Z15.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.

Z15.5 The *Contractor*'s personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.

Z15.6 The *Contractor* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.

Z15.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer*'s expense, and conducted in line with South African legislation.

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

General

The Matla Power Station is situated approximately half way between Bethal and Ogies on the R545, being just over 30 km from each town and 13 km north-west of Kriel town.

Climate

Matla Power Station is situated in a summer rainfall area with an average annual precipitation of about 750-mm falling almost entirely during the months of October to April. The average rainfall per month generally exceeds 40 mm during this period, although drought periods do occur which can last for 20 days or longer. Drought periods occur most frequently during the months of October/November and March/April. January is statistically the highest rainfall month with an average monthly rainfall of about 130-mm. June has the lowest rainfall with an average monthly rainfall of about 7 mm.

Approximately 85% of the annual rainfall occurs in the summer months and heavy falls of 125 to 150 mm occasionally occur in a single day. The annual average number of thunderstorms is about 75. These storms are often violent with severe lightning and strong (but short-lived) gusty winds and are sometimes accompanied by hail. This region has among the highest hail frequencies in South Africa; about 4 to 7 occurrences (depending mainly on altitude) may be expected annually.

January is normally the hottest month with an average daily maximum temperature of 27°C with a mean daily temperature in winter being about 16°C. Winter average daily temperatures vary from 18, 5°C maximum to -1°C minimum. The extreme temperatures recorded range from 34, 7°C to minus 12, 4°C for the period 1920 - 1984. (Source: Weather Bureau, Pretoria)

Winds are generally light to moderate except during thunderstorms. Generally the prevailing wind directions are from the North West during the day and from the east at night. During daytime, the prevailing winds are from the north-western direction. During night-time, the prevailing winds are from the north-eastern direction. The highest recorded average wind speed is 17, 6 km/hour. The average wind velocity over the year is 14, 5 km/hour.

(Source: MSN weather & Weather 24, average records 2008 - 2009.)

Weather Data

The assumed 1 in 10 year rainfall figures are:

Month	Cumulative rain (mm)	No of days with rainfall > 10mm
January	200	6
February	150	6
March	120	5
April	110	4
May	40	3
June	20	2
July	30	2
August	30	2
September	60	3
October	140	6
November	160	7
December	170	6

Relative Humidity

Records for Bethal (2008 - 2009)
The average relative humidity on an annual base are as follows:
08:00 = 80%
14:00 = 52%
20:00 = 73%

Prevailing Winds

Records for Bethal (2008 - 2009)
Winds are mostly north-westerly except for February and March when they are easterly to south-easterly. The highest wind speeds are recorded from the south-east: on average 14km/h.

Other Climatic Factors

Records for Bethal (2008 - 2009)
Thunder occurs mostly from November to January with average of 35.7 days annually.

a) Hail occurs mostly in December with average of 2.8 days annually.
b) Fog occurs mostly in the winter months with an average of 19 days annually.
c) Snow rarely occurs
d) Cloud coverage is highest in the summer months with annual average as follows:
    - 08:00 = 2.8/8
    - 14:00 = 3.8/8
    - 20:00 = 3.1/8

Evaporation for the area is in rage of 75mm to 190mm per month. The highest evaporation occurs in December, and the lowest in June.

Topography

The surface topography of the Matla area is typical of the Mpumalanga Highveld consisting in the main of a gently undulating plateau. The flood plains of the local streams are at an average elevation of ± 1540 meters above mean sea level and drainage generally is a northerly direction.

Air Quality

The existing and potential sources of air pollution in Matla area are the following:

- Matla Power Station stack emissions
- Matla Power Station dry dust (fly ash) handling plant
- Dust blow from the Eskom coal stock yard

- Dust blow from the roads in the area
- Seasonal dust blow caused by ploughing of farmlands, and dust blow off denuded fields
- Dust blow from dried out exposed surfaces of the wet ash dam.

However, Eskom utilises the majority of the top surface of the ash dam as an evaporation pan for polluted water, which means that the exposed surface is constantly wet. The sides of the ash dam have largely been rehabilitated, with the result that dust blow from the ash dam.

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

C1.2 Contract Data

Part two - Data provided by the *Contractor*

[Instructions to the contract compiler: (delete this notes before issue to tenderers with an enquiry)
Whenever a cell is shaded in the left hand column it denotes this data is optional. If not required select and delete the whole row, otherwise insert the required Data.]

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 *Contractor* is (Name): Address Tel No. Fax No.	
11.2(8)	The *direct fee percentage* is The *subcontracted fee percentage* is	**%** **%**
11.2(18)	The *working areas* are the Site and	
24.1	The *Contractor's* key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	

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

		CV's (and further key persons data including CVs) are appended to Tender Schedule entitled .		
11.2(3)	The *completion date* for the whole of the *works* is			
11.2(14)	The following matters will be included in the Risk Register			
11.2(19)	The Works Information for the *Contractor*'s design is in:			
31.1	The programme identified in the Contract Data is			
A	**Priced contract with activity schedule**			
11.2(20)	The *activity schedule* is in			
11.2(30)	The tendered total of the Prices is	**(in figures)** **(in words), excluding VAT**		
	Data for Schedules of Cost Components	*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).*		
A	**Priced contract with activity schedule**	**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:		
44 in SCC	The percentage for Working Areas overheads is:	**%**	
51 in SCC	The hourly rates for Defined Cost of manufacture or fabrication 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**
52 in SCC	The percentage for manufacture and fabrication overheads is	**%**	

PART 2: PRICING DATA

ECC3 Option A

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option A	
C2.2	The *activity schedule*	

C2.1 Pricing assumptions: Option A

How work is priced and assessed for payment

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

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

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

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

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

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

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

Function of the Activity Schedule

Clause 54.1 in Option A states: “Information in the Activity Schedule is not Works Information or Site Information”. This confirms that specifications and descriptions of the work or any constraints on how it is to be done are not included in the Activity Schedule but in the Works Information. This is further confirmed by Clause 20.1 which states, “The *Contractor* Provides the Works in accordance with the Works Information”. Hence the *Contractor* does **not** Provide the Works in accordance with the Activity Schedule. The Activity Schedule is only a pricing document.

Link to the programme

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

Preparing the *activity schedule*

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

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

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

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

C2.2 the activity schedule

An activity schedule could have the following format:

Item No.	Programme Reference	Activity description	Price

NOTE:

Tenderers shall allow in their rates for the cost of all materials, labour, transport, profit, supervision and all other costs which may be incurred in the proper execution of the works (access, compressed air, water, electricity etc). This could also include, but not be limited to levies payable to any industrial councils, associations, etc that may be due by the tenderer, the cost of compliance to legislation, for instance regarding Health and Safety, compliance with Labour Legislation, etc.

PRICE ADJUSTMENT FOR INFLATION.

Item	Description of Work	Proportion %	Source of Index (CPI, PPI, SEIFSA)	Index Table
1	Material			
2	Labour			
3	Transport road freight cost			
4	Non-Adjustable	15%		
	Total Percentage:	**100%**		

PART 3: SCOPE OF WORK

Document reference	Title	No of pages
	This cover page	1
C3.1	*Employer*'s Works Information	
C3.2	*Contractor*'s Works Information	
	Total number of pages	

C3.1: EMPLOYER'S WORKS INFORMATION

GENERAL

- Data books, reviews, reports and diagrams/drawings shall be submitted to Engineering after the completion of the work. Engineering to forward the data books to Quality Department (Document Control)
- All QCP's to be submitted to Engineering and Quality for approval prior to outage/project or maintenance work commencement.

1. Introduction

Electrical cables in groups are one of the major fire hazards at power plants. Electrical and C&I cables present the following hazards:

- The cable insulation is a large source of combustible material.
- Fire can spread quickly along cable routes throughout the power plant.
- Cables exposed to small intensity fires can result in major damage to plant and equipment.
- Exposure to toxic and corrosive gases from electrical cable fires is a risk to life, safety, plant and equipment.
- Electrical cables are a potential source of ignition.

This document focuses on the cable spreading areas in the Matla Power Station Auxiliary Bay on 4.8 and 10.4 meter level (ML) for units 1 to 6.

The scope of this document focuses on passive fire protection measures for the cable spreading areas.

2. Supporting Clauses

2.1 Scope

The passive fire protection work is for the auxiliary bay cable spreading areas (chambers) on 4.8 ML and 10.4 ML at Matla Power Station for units 1 to 6, these are further divided as follow:

- Area 1 – 4.8ML Units 1 to 6 (6 in total)
- Area 2 – 10.4ML Units 1, 3 & 5 (3 in total)
- Area 3 – 10.4ML Units 2, 4 & 6 (3 in total)

The scope of work (SOW) entails passive fire protection measures which includes the following:

- Partial coating of all grouped cables on cable racks.
- Coat all structural elements (exposed steelwork) with a 2 hour rated fire resistant coating.
- Fire area integrity to be evaluated and re-established by closing/sealing of openings to provide 2 hour fire rating.
- Installation of additional fire doors

2.1.1 Purpose

This document outlines the work that is required to be carried out to ensure a 2 hour fire rating of the cable spreading areas

2.1.2 Applicability

This document applies to the auxiliary bay cable spreading areas on 4.8 ML and 10.4 ML at Matla Power Station.

2.2 Normative/Informative References

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

2.2.1 Normative

[1] 240-56737450 Fire Protection and Life Safety Design Standard

[2] 240-56227443 Requirements for Control and Power Cables for Power Stations Standard.

[3] SANS10400-T The Application of the National Building Regulations - Fire Protection

[4] 240-53114026 Project Engineering Change Management Procedure

[5] 240-53113685 Design Review Procedure

[6] 240-86973501 Engineering Drawing Standard

[7] 240-93576498 KKS Coding Standard

[8] 240-71432150 Plant Labelling Standard

[9] 240-109607332 Abbreviation Standard for Labelling of Plant at Power Stations

2.2.2 Informative

[10] OHS Act of 85 , 1993 (Occupational health and safety act)

[11] ISO 9001 Quality Management Systems.

2.3 Definitions

Definition	Description
Area 1	Represents chambers (6 in total) in Unit 1, 2, 3, 4, 5, & 6 on 4.8m level
Area 2	Represents chambers (3 in total) in Unit 1, 3, & 5 on 10.4m level. Has the same structural layout as the chambers represented by Area 3, it is only the cables inside the chambers that are routed different to that of Area 3
Area 3	Represents chambers (3 in total) in Unit 2, 4, & 6 on 10.4m level. Has the same structural layout as the chambers represented by Area 2, it is only the cables inside the chambers that are routed different to that of Area 2, and there are some plumbing in these chambers that are not in the chambers of Area 2.

Chamber	This is a cable spreading area, each chamber is a fire area. No chambers are connected to other chambers, there are 12 Chambers in total:
	• There are 6 chambers on the 4.8m level
	  ○ Area 1 represents these chambers in Unit 1 to 6
	• There are 6 chambers on the 10.4m level:
	  ○ Area 2 represents the chambers in Unit 1, 3, & 5
	  ○ Area 3 represents the chambers in Unit 2, 4 & 6

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: • A multiple-unit load loss or trip;

Definition	Description
	• Loss of transmission or distribution capability; • Permanent loss of production or products; or Danger to fire-fighting personnel involved in fighting the fire
Fire Area	Fire Area is an area that is physically separated from other areas by space, barriers, walls, or other means in order to contain fire within that area.
Fire Barrier	A fire barrier is a continuous membrane, either vertical or horizontal as a wall, floor or ceiling assembly that is designed and constructed with a specified fire resistance rating to restrict the spread of fire and the movement of smoke.
Fire Compartment	A fire compartment is an area within a building which is completely surrounded with fire-resistant construction.
Fire Door	Automatic or self-closing door assembly which complies with the requirements contained in SANS 1253 [38], and which is especially constructed to prevent the passage of fire for a specific length of time.
Fire Protection	Method of providing for fire control or fire extinguishment.
Fire Protection/Detection Assessment	A fire protection/detection assessment is the initial, multi-disciplinary process in which reasonably foreseeable hazards are identified, the severity of the potential harm, to people and plant, is assessed, and reasonable engineering solutions to mitigate these hazards are proposed.
Passive Fire Protection	A Passive fire protection system is preferred above active fire protection. Because it is passive it does not require any mechanical or electrical parts that can fail in the event of a fire. These systems include spatial separation from other areas, containment areas, drainage, fire separation barriers, fire breaks, fire retardant cables, etc.
Smoulder	When something burns slowly with smoke but no flame
Unit	A boiler, turbine and generator set and all its dedicated auxiliaries.

2.3.1 Disclosure Classification

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

2.4 Abbreviations

Abbreviation	Description
CSA	Cable Spreading Area
ECM	Engineering Change Management
ML	Meter Level
PLCM	Project Life Cycle Model
Q.C Decking	Composite Steel and Concrete Slab System
SANS	South African National Standards
SOW	Scope of Work

2.5 Roles and Responsibilities

The Employer provides the explanation of the works executed by the contractor.
The Contactor is responsible for executing the works as set out by the employer.

2.6 Process for monitoring

ECM Process: The Engineering Change Management Process will assist in ensuring that the PLCM is followed and all required documentation will be developed for the project.

Design Review Procedure: The design review procedure will ensure that the design from the *Contractor* is reviewed and the system performs the intended purpose.

3. Description of the existing plant

3.1 Overview of the cable spreading areas

Intermediate level cable spreading areas (chambers) are located on 4.8 ML and 10.4 ML in the Matla Power Station Auxiliary Bay on units 1 to 6. These chambers are separated from all other plant areas and are divided per unit into fire areas (compartmentalised) by walls and fire doors.

The CSA are divided into 3 areas for the purpose of this technical specification to provide clarity on the status and configuration of plant for each area.

Table 1: Matla Power Station Cable Spreading Area Division

Area	Description (Inclusion) of the Area
Area 1	• 4.8m level Units 1-6 • Electrical cables • Cables fairly neatly routed on the floor and racks • Unitised
Area 2	• 10.4m level Units 1,3 and 5 • Electrical and C&I cables • Cables not properly routed. • Same floor area as Area 3 • Unitised passively but cables supply 2 units
Area 3	• 10.4m level Units 2,4 and 6 • Electrical cables and C&I cables • Cables routed fairly neatly on the floor and racks • Plumbing- water and drain pipes • Same floor area as Area 2 • Unitised passively but cables supply 2 units

Figure 1, Figure 2, Figure 3, and Figure 4 demonstrate the layout of these chambers, please note that this is general and not specific to any Unit, thus Area 2 and Area 3 will be shown as the same area.

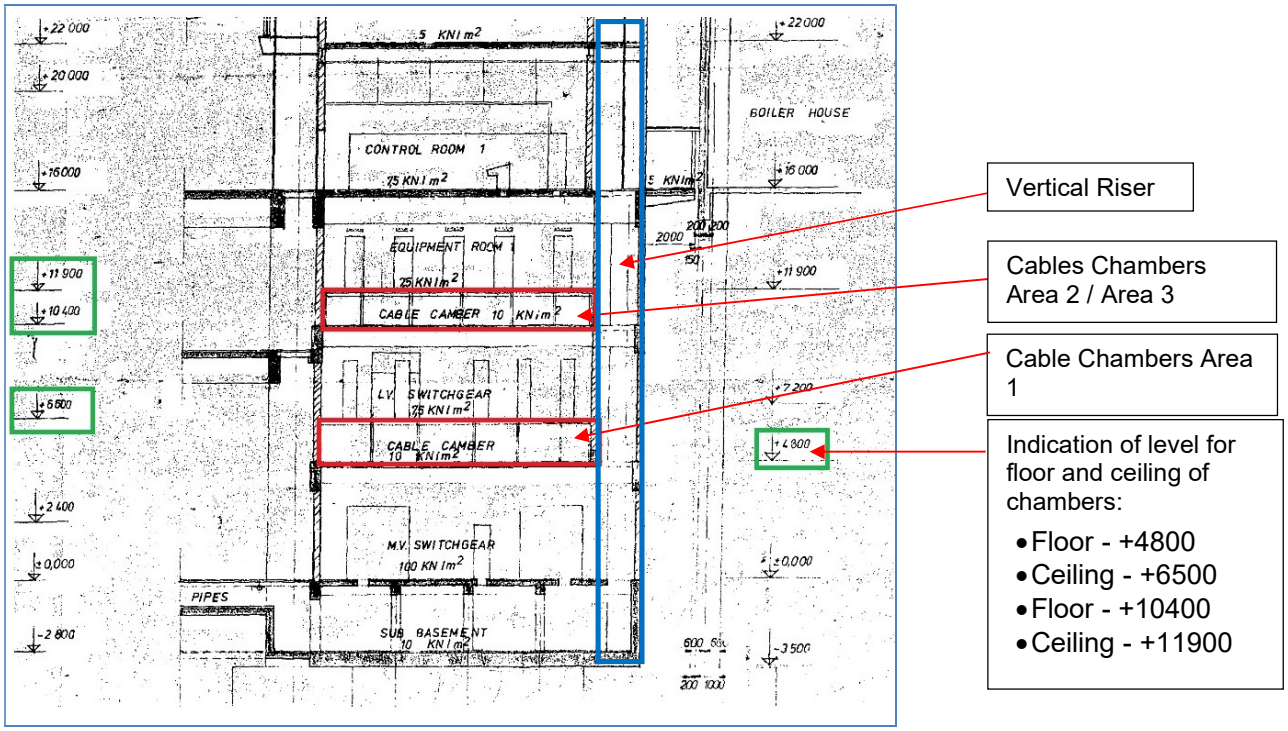

Figure 1: Unit 1-3 Auxiliary Bay Cross Section (Drawing [12])

Figure 1 is an extract from a plan and section drawing [12] of Unit 1-3 Matla Power Station's Auxiliary Bay cable chambers located on 4.8 and 10.4 meter levels. These chambers are separated from all other plant areas. The cable spreading areas are not easily accessible as they are only about 1.5m in height on the 10.4m level and about 1.7 meters in height on the 4.8m level. Approximately 0.2m to 0.3m is taken up by the I-beams on the roof of the area thus the accessible height is less than 1.7m and 1.5m respectively.

Some of the cables are installed and routed in a way that makes it difficult to crawl freely inside the cable spreading areas between cable racks.

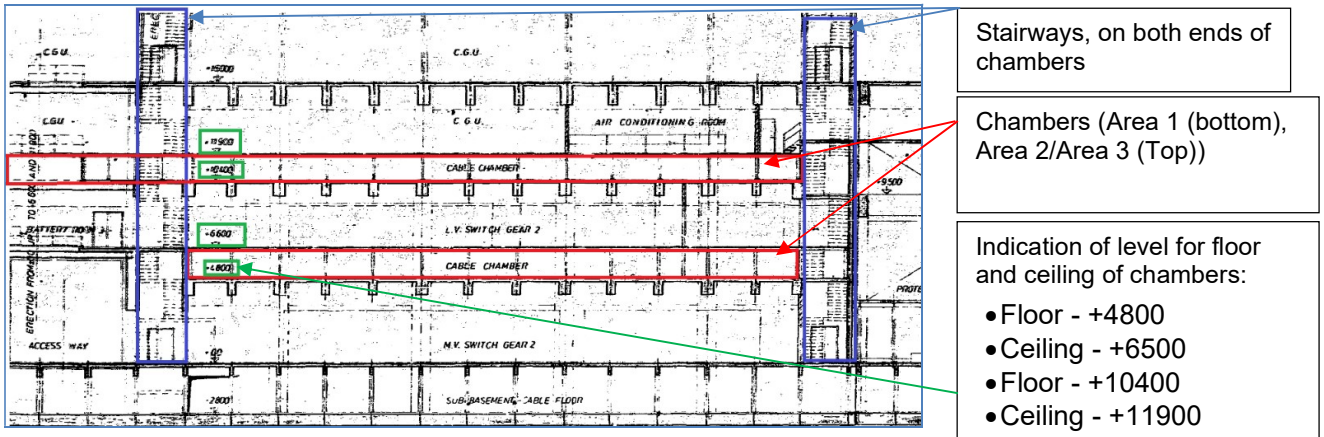

Figure 2: Unit 2 Auxiliary Bay Longitudinal Section (Drawing [13])

Figure 2 is an extract from a plan and section drawing [13] of Unit 2 Matla Power Station's Auxiliary Bay cable chamber located on 4.8 and 10.4 meter levels, this gives a side view.

The drawings giving sectional areas of the auxiliary bay (Figure 1 & Figure 2) has shown the following with regards to the cable spreading chambers:

- 4.8 meter level and 10.4 meter levels are connected with each other through a vertical riser that starts at the basement. The vertical riser is not an emergency exit. The Contractor ensures that it is a separate fire area.
- Each cable chamber forms a separate fire area at 4.8m and 10.4m
- The cable chambers at 4.8m (Area 1) are unitised. A fire in Area 1 will only affect a single unit.
- The cable chambers at 10.4m level are not unitised. C&I and electrical cables run in these areas (Area 2 and Area 3). A fire in Area 2 or Area 3 would affect 2 units. Example a fire at Unit 1 or 2 10.4m would affect both unit 1 and 2

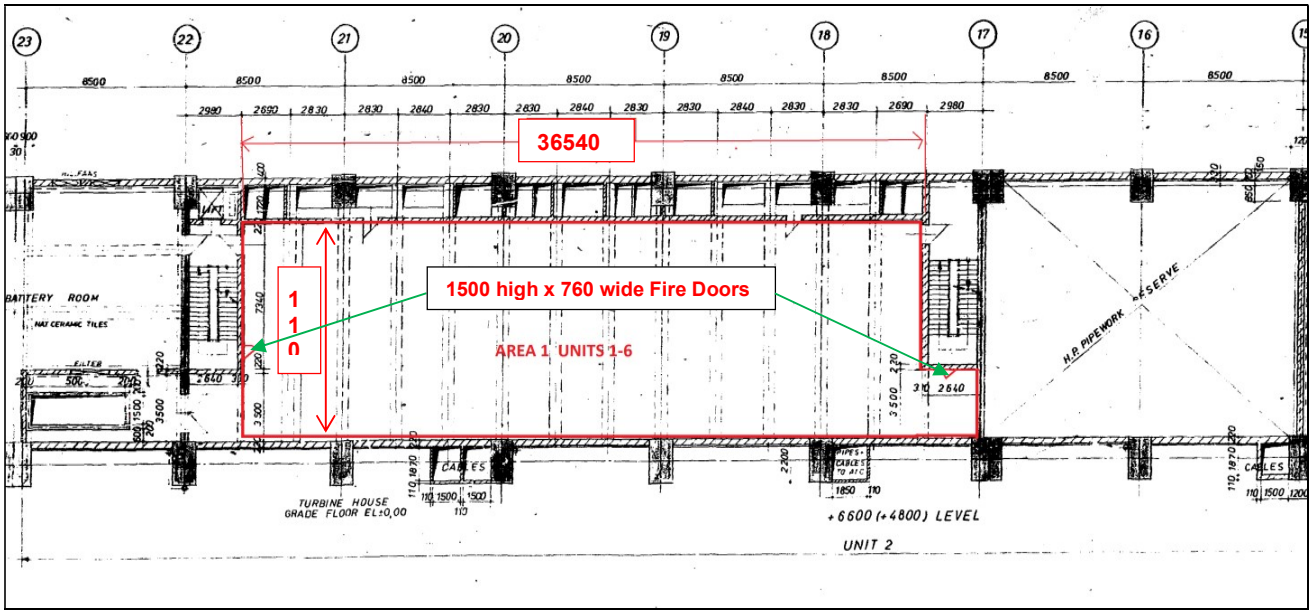

Figure 3: Area 1 Units 1-6 (4.8m) (Drawing [16])

In Figure 3 the staircases can be seen as well as the chamber area (Area 1) on 4.8m level. The each unit has an individual cable chamber. The cable chamber is not connected to the adjacent units

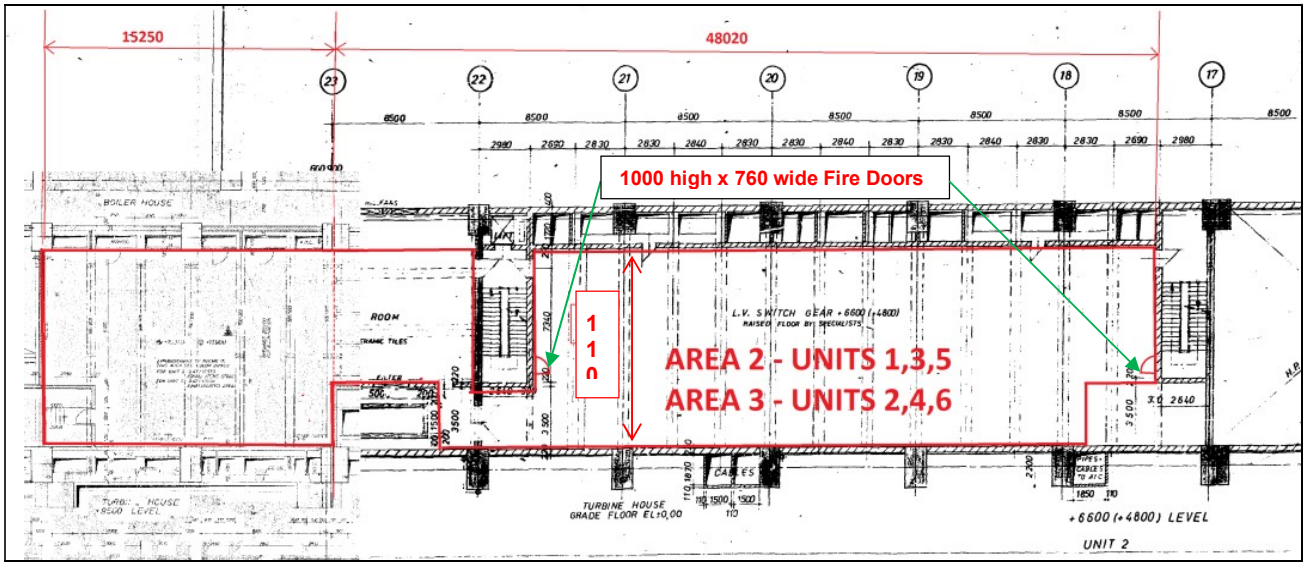

Figure 4: Area 2 Units 1, 3, 5 and Area 3 Units 2, 4, 6 (Combination of drawings [16] and [19])

In Figure 4 the staircases and fire doors can be seen as well as the chamber area on 10.4m level (Area 2 and Area 3). Please note that Area 2 is on Units 1, 3, 5 and Area 3 is on Units 2, 4, 6. The layout for Area 2 and Area 3 are exactly the same in terms of floor area and layout of walls (hence they are both shown in Figure 1, Figure 2, and Figure 4), the only difference is that the cable routing in each of these 2 areas are different, and Area 3 has plumbing. The idea of Figure 1, Figure 2, and Figure 4 is to indicate where Area 2 and Area 3 are located in relation to Area 1. Each unit has an individual cable chamber. The cable chambers are not connected to the adjacent units, but the cabling is connected over multiple units.

3.1.1 Design Information

Power cables present in the cable spreading areas include:

- For LV power cable 600/1000 V rated voltage, copper-stranded conductors PVC insulation cables.
- For single or three core MV power cable rated voltage copper or aluminium stranded conductors; triple extruded cross linked polyethylene (XLPE) insulation cables.
- Cable type BVXnnCM: Multi-core insulated thermoplastic cables, 600/1000V voltage rating, current rating varies with conductor size, minimum size is 1.5mm^2.
- Cable type UVGnnACM: thermoplastic insulated overall screened twisted pair, 300/500V voltage rating, 0.5mm^2 conductor areas, 1A current rating.
- Cable type BVSnnCM: Multi-core thermoplastic insulated overall screened (not armoured)

The current roof construction of both the 4.8ML and 10.4ML cable spreading roofs are composite roof slabs which comprises of Q.C trays and concrete. The Q.C trays are supported by a grid of I beams and steel columns.

The existing doors separating the cable chambers of the different units consist of 1000 x 760 mm class B fire door assemblies in Area 2/3 and 1500 x 760 mm assemblies in Area 1.

4. Engineering and the Contractor's Design

4.1 *Employer's* Requirements

The *Employer* requires the area to be a fire area / fire compartment which is 2 hour fire rated.

4.2 *Contractor's* Design

The *Contractor* caters for the passive fire protection requirements as stipulated in this document and use the standards mentioned in this document.

4.2.1 Design basis for Fire Protection

The scope entails passive fire protection the *Contractor* ensures that the following is done:

1) Coat all grouped cables where physically possible as per requirements in this specification.
2) Coat all structural elements (exposed steelwork) with a 2 hour rated fire resistant coating.
3) Fire area integrity to be evaluated and re-established (which includes gaps on masonry walls, floors, roof and fire doors).
4) Installation of additional fire doors

5) Identification and labelling of all fire seals and cable coating

The *Contractor* ensures that the fire areas (each chamber) has a fire rating of two (2) hours in compliance with the fire resistance criteria for insulation, stability and integrity as specified by recognised testing institutions and their standards. Test result certificates of insulation, stability and integrity of the material on the standard time/temperature curve to be submitted for acceptance for any product used as part of this SOW.

The *Contractor* ensures that all fire barriers comply with the requirements as set out in the Eskom Fire Protection and Life Safety Design Standard [1] Section 5.3.

The *Contractor* prepares and installs all the fire barriers and coatings as per manufacturer's recommendations. The *Contractor* shall confirm ambient conditions in the CSA to ensure selected passive fire protection products are suitable for the ambient conditions in the area.

The *Contractor* takes into account the confined space and existing cables in the selection of the appropriate type of fire coatings.

4.2.1.1 Fire Retardant Cable Coating

The *Contractor* ensures that the coating is a fire retardant 2 hour rated coating.

All fire barriers must comply with the requirements as set out in the Eskom Fire Protection and Life Safety Design Standard [1] Section 5.3. Additional recommendations are noted in Section 3.7 of Eskom Standard Requirements for Control and Power Cables for Power Stations Standard [2].

Coating of cables on every rack are generally spaced at 2 meters of coating for every 20 meters of exposed cables. Coating is applied as far as reasonably practical. Where cable rack congestion makes application impractical, distance between coatings can vary.

Prior to coating, the cables are to be cleaned, cleaning of cables with water and soap is prohibited.

The only chemicals that might be considered are non-conductive and noncorrosive chemicals. The chemical must have been used before for the similar scope and it must have yield desired outcome.

Cleaning by means of the industrial hoover that will suck the dirt and accumulated dust is preferred versus blowing the cables as that will create a dust that will be difficult to remove from the tunnel. Unless if the blowing has been done before and it has yielded the desired outcome.

Table 2 gives approximate quantities related to the cable coatings of the scope of work. The *Contractor* confirms the actual quantities required.

Table 2: Cable Coating Requirements - Approximate Quantities

Item	Description	Quantity per unit	Area Applicable	Total amount of Units
1	**Penetration seals** Cleaning/Preparation and Coating of cables for 1 m length, 0.6m width and 0.15m height on either side wherever cables, pass through walls, floors or ceilings which are boundary elements for a specified fire area. There are 4 of these cable racks on top of each other at certain areas, and at other areas it is less.	30 sections of cable (Assumed 30 per unit, at 15 per area)	Area 1, Area 2, and Area 3	6 (Total penetrations to be sealed are then assumed at 6x30=180 penetrations)

2	**Cable coating** Cleaning/Preparation and Coating of horizontal cables (every 20m for a distance of 2m)	27 sections of 2m in length, 0.6m width and 0.15m height each per area, thus 54 per unit	Area 1, Area 2, and Area 3	6 (Total penetrations to be sealed are then assumed at 6x54=324 cable coated)

4.2.1.2 Fire Area Integrity

The 4.8ML and 10.4 ML have been broken up into defined fire areas per unit.

The *Contractor* ensures:

1) All fire area elements to be 2 hourly rated.

2) Fire area seals to be installed wherever cables, pipes or ducts pass through walls, floors or ceilings which are boundary elements for a specified fire area. Fire area seals are also required at the interface between the composite floor slab above the chamber and the adjacent wall. The seal provides a 2 hourly fire resistance, limiting the spread of fire and reduce its effects on plant equipment and personnel. Any openings or gaps in the walls/floors/roof to also be sealed to provide a 2 hourly fire rating.

3) All construction joints in the floor, roof slab and walls are also required to be sealed with a 2 hourly fire rated system.

4.2.2 Structural Requirements

The *Contractor* ensures the structural scope includes the coating of structural steel columns and beams, coating of composite roof slab and sealing of gaps on the masonry walls.

The *Contractor* is required to submit all details of the proposed passive fire protection installations for review and acceptance prior to the commencement of any work. All products are installed in accordance with manufacturer's specifications.

The *Contractor* takes into consideration the constraints of the confined space within the cable chambers as well as the existing cable racks in the selection of the appropriate fire protection coating. Coatings with hand application methods is therefore preferred.

4.2.2.1 Structural Steel Fire Protection

The *Contractor* is required to protect structural steel columns and beams to attain a 2 hour fire resistance as follows:

All structural steel columns and beams to be protected with a two hour fire rated intumescent coating or similar approved product in accordance with SANS10400-T: The Application of the National Building Regulations - Fire Protection.

4.2.2.2 Composite Roof Slab Fire Protection

The *Contractor* is required to protect the composite roof slab with a two hour fire rated intumescent coating or similar approved product in accordance with SANS 10400-T: The Application of the National Building Regulations – Fire Protection. Use of a vermiculite or perlite cement type of coating will not be acceptable on the underside of the composite slab due to the added weight as well as the deflections of the slab which would affect adhesion of the coating over time.

Table 3 gives approximate quantities related to the Structural Element Coating Requirements of the scope of work. The *Contractor* confirms the actual quantities required. It should be noted that at least 2 bays in each area are braced with vertical and horizontal cross bracing composed of angle members.

Table 3: Structural Element Coating Requirements - Approximate Quantities

Item	Description	Quantity	Area Applicable	Total amount of Units
1	Fire Doors	12	4.8 ML	N/A
2	Fire Doors	12	10.4 ML	N/A
3	New fire Doors (1000x760) mm	6	10.4 ML	6
4	Number of structural steel columns - 152x152 H (≈1.35 m long columns)	62	Area 1 – Per Unit	6
5	Length of structural steel beams - 305x165I (m)	180	Area 1 – Per Unit	6
6	Length of structural steel beams - 254x146I (m)	185	Area 1 – Per Unit	6
7	Length of structural steel beams - 150x90I (m)	510	Area 1 – Per Unit	6
8	Area of composite roof slab (m^2)	415	Area 1 – Per Unit	6
9	Number of structural steel columns - 152x152 H(≈1.4 m long columns)	100	Area 2/3 – Per Unit	6
10	Length of structural steel beams - 254x146I (m)	290	Area 2/3 – Per Unit	6
11	Length of structural steel beams - 203x133I (m)	230	Area 2/3 – Per Unit	6
12	Length of structural steel beams - 150x90I (m)	145	Area 2/3 – Per Unit	6
13	Area of composite roof slab (m^2)	645	Area 2/3 – Per Unit	6

4.2.2.3 Sealing of Existing Gaps on the Masonry Walls

The *Contractor* is required to seal all gaps on the masonry walls with a suitable product based on the size of the opening to be sealed. The sealing product has two (2) hour fire resistance in compliance with the fire resistance criteria for insulation, stability and integrity as specified by recognised testing institutions and their standards.as specified by recognised testing institutions and their standards. Large openings in the double skin masonry walls without any services passing through may be closed with similar masonry units in Class I mortar.

Table 2 gives approximate quantities related to the structural requirements of the scope of work. The *Contractor* confirms the actual quantities required.

4.2.2.4 Existing Fire Doors

All fire door assemblies that are in place and not damaged can stay as Class B fire doors. but if the fire doors need to be replaced, due to damage, it needs to be Class D fire door assemblies with door closers to ensure that fire doors remain closed at all times in accordance with SANS 1253.

4.2.2.5 New Fire Doors

New fire doors are to be installed at 10.4 ML , the doors are to be Class D fire door assemblies with door closers to ensure that fire doors remain closed at all times in accordance with SANS 1253.

4.2.3 Configuration Management and Document Management

4.2.3.1 Design review procedure

The *Contractor* is the Design Authority as defined in the Design Review Procedure (240-53113685). The *Contractor* is responsible for following the design procedure and conducting all the design reviews as specified in this procedure. The *Contractor* is responsible for conducting the following design reviews:

1. Design Freeze Review (Detail design)
2. Integrated Design Review (Detail design)
3. Pre-Commissioning Review
4. Acceptance testing Review
5. Handover Review

For design review purposes the designs will be reviewed per part of the works as well as an integrated design where all interface issues between the various parts are addressed. In general:

1. The interim design stage will be an iterative process between the *Employer* and the designer with regular progress meetings.
2. The interim design stage will culminate with the submission of a report.
3. After receipt of the design report, the *Employer* will have ten (10) working days to review and submit comments to the designer.
4. The designer shall then have five (5) working days to submit the updated final design report.
5. The submission will then constitute the End of Phase review and the *Employer* will accept the final design report with comments by the *Employer* and updates by the designer within five (5) working days.

4.2.3.2 Engineering Change Management

All Design change management to be performed in accordance to the latest revision of the Eskom Project Engineering Change Management Procedure (240-53114026) and the *Employer* shall ensure that *Contractor* is provided with latest revisions of this procedure. Any uncertainty regarding this procedure should be clarified with the *Employer*. All design reviews will be conducted according to the Design Review Procedure (240-53113685).

All changes to be performed in accordance to the latest revision of the Eskom Project Engineering Change Procedure (240-53114026) and the *Employer* shall ensure that *Contractor* is provided with latest revisions of this procedure. Any uncertainty regarding this procedure should be clarified with the *Employer*. All design reviews will be conducted according to the Design Review Procedure (240-53113685).

4.2.3.3 Drawings Format and Layout

The creation, issuing and control of all Engineering Drawings will be in accordance to the latest revision of 240-86973501 Engineering drawing Standard. Drawings issued to

Eskom will be a minimum of three hardcopies and 3 electronic copies. The *Contractors* shall ensure that Eskom process is been followed. Plant Coding and Labelling

4.2.3.3.1 Labelling of Passive Fire Protection Installations

The *Contractor* is required to install labels adjacent to all fire barriers installed (Fire doors, penetrations etc). Labels are required to indicate all details of the installation allowing for future replacement by the *Employer* to the same specification if required.

The *Contractor* also provides labels on the walls for each fire area depicting all details of the fire coatings applied to cables, structural steel members and the soffit of the above floor slab. Sufficient information is provided to allow repairs to be carried out by the *Employer* in future should any damage to the coatings occur.

The *Contractor* provides a drawing for each area per unit indicating the positions and details of the passive protection installed. Reference numbers are given for each installation which correlates with the reference number on the adjacent label installed on site. Specifications for each installation is provided on the drawings.

4.2.4 General Requirements

Any and all fixtures in the area where fire resistant coatings will be applied (roof soffit / steel columns / steel beams) should not be contaminated with coating material. The fixtures include fire detection equipment, lights and associated equipment, dampers, electrical fittings etc.
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 materials such as valves, instruments, etc. Drawing numbers will be assigned by the *Employer* as drawings are developed.

The project name is listed on all drawings, including manufacturers' drawings. Tag numbers and equipment names are listed on all manufacturers' drawings. A separate sheet may be attached to the submittal if needed to adequately list all tag numbers associated with the drawings such as valves or instruments which may have numerous tag numbers associated with it.

The language of all documentation is in the English language. The units of measurement are metric.

The *Contractor* retains project design calculations and information for the entire life cycle of the plant and provides these to the *Employer* on prior written notice at any time notwithstanding the expiry or termination of the contract.

4.3 As-Built drawings, operating manuals and maintenance schedules

The contractor is to provide drawings that indicate the installed fire barriers and coatings, with the relevant details of the materials used. The drawings is to indicate where all barriers and coatings are installed as well as the KKS identification number

4.4 Quality Management

4.4.1 Test Certificates

All fire resistant coating or fire resistant barriers that will be supplied as part of this scope shall have test certificates for the specific product that is not older than 5 years. The test certificates shall be in accordance with

- SANS 10177 Fire testing of materials, components and elements used in buildings
- IEEE 634 Testing for Fire Rated Penetration Seals; or
- ASTM E814 Fire Test of through Penetration Fire Stops; or Equivalent.

Test certificates show the product fire rating in terms of stability, integrity and insulation for 120 minutes.

Test certificates of proposed products are also supplied at tender stage.

4.4.2 Fire Barrier and Fire Coating Labelling

All fire resistant coatings and fire resistant barriers will be labelled indicating

1. Product Name,
2. Uniuque identification code (KKS)
3. Date of Installation and
4. Fire Rating.

4.4.3 Inspection and Testing

Before any fire barrier or fire coating is built or applied a full application plan with the required Quality Control Plans (QCP's) / Inspection and Testing Plans (ITP's) will be in place with the relevant hold and witness points as required by the *Employer*. This will include any priming that is required before application.

Material application guarantees will be provide as part of the scope.

All relevant inspection, testing and maintenance requirements for the products supplied as part of the scope shall be supplied.

All drawings shall be created/updated to indicate the applied fire barriers, coatings etc.

5. List of drawings

5.1 Drawings issued by *Employer*

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

[12] 0.47/108 BQ - Auxiliary Bay Cross Sections (Matla 1-3 Power Station)
[13] 0.47/129 Sheet 4/2 - Auxiliary Bay Longitudinal Section Unit 2
[14] 0.47/107 BQ – No titles, but same type of drawing as in [12] above
[15] 0.47/23414 Rev 10 – Cable Floor +4800 Unit 3 FC 1-146
[16] 0.47/129 SHT 10 Auxiliary Bay Unit 2 plan view 6600,11900
[17] 0.47/23493 Rev 0 – Cable Chambers ½ Level +10,40 FC 153 – Unit 3
[18] 0.47/10708 Rev 4 – Cable Floor +4800 Unit 1 FC 144
[19] 0.47/129 SH24 Auxiliary Bay Plan View +11900 from Column 23 to 27

PART 4: SITE INFORMATION

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

C4: Site Information

C4.1: Information about the *site* at time of tender which may affect the work in this contract

1. Access limitations

The works is within the security area of Matla Power Station and access to the site will be governed by the terms and conditions laid down by the Station Security Officials from time to time. The Contractor shall satisfy himself as to these terms and conditions and shall price his works accordingly.

The Contractor shall liaise with Matla Power Station Security Staff in order to obtain temporary permits for his staff and vehicle, which will be working within the Station.

With the exception of Construction Plant the Contractor shall be restricted to having only one other vehicle on site for transporting his employees and materials. Any other need is to be granted by the Employers Representative.

Personnel and vehicles entering and leaving the site are subject to routine searches and substance abuse testing.

The Contractor will have to obtain a “gate permit” from the Employers Representative, before materials and equipment can be removed from the site. The “gate permit” gives and itemized list of materials and equipment to be removed from site.

The Contractor shall make his own assessment of, and shall allow in his rates for those access problems which may be encountered and no extra payment or claim of any kind will be allowed on account of difficulties of access to the Works.

2. Ground conditions in areas affected by work in this contract

N/A

3. Hidden and other services within the *site*

All known services will be brought to the attention of the Contractor by Employers Representative. Should the Contractor encounter any other services in the work area, he will immediately bring them to the attention of the Employers Representative who will issue instructions as to what actions are to be taken.

The protection of all pipes, gauges and plant is of extreme importance. Should any damage take place, which is due to the Contractors negligence, another Contractor will be brought onto site to affect repairs. All costs will be to the account of the Contractor who caused damage.

4. Details of existing buildings / facilities which *Contractor* is required to work on

Not applicable. The Contractor to specify any information required if necessary.

5. Inspection on site

The *Contractor* shall take note of, and allow in his price for any items which may not be clearly defined on the enquiry drawings and / or document / s submitted with this tender. He shall also ensure that surfaces to be protected are inspected in order to evaluate extent of surface preparation for which he will be responsible. All inspections with Matla Engineering are to be arranged 24 hours in advance.

6. Accommodation for employees

The *Contractor* is required to make sure of his own arrangements for the accommodation of his employees. Accommodation is normally available at the single quarters near the Power Station for single men. The *Contractor* is advised to contact Eskom's Housing Manager at the Station concerning accommodation requirements, tariffs and conditions.

7. Telephone & telecommunications

A telephone is not available on site. Should the *Contractor* require one, he is to make his own arrangements with the relevant authorities. Arrangements may be made with the *Employers Representative* to use telephones of the Station if they are available. Calls from these will be charged for at prevailing GPO rates. Should the *Contractor* wish to use radio communication equipment on site, he will make his own arrangements with the relevant authorities. In this case though, he is required to liase with the Head of Security at the Station to ensure that there is no interference with existing channels or equipment.

8. First aid and fire fighting

Adequate first aid and firefighting equipment to be provided by the *Contractor* who also may in cases of emergencies or accidents call upon the services of the first aid and firefighting resources at the Power Station.

9. Welding on site

No welding will be allowed on site unless permission is granted in writing by the *Employers Representative*.

10. Safe plant isolations

It is the *Contractor's* responsibility to liase with the *Employers Representative* in respect of safe plant isolations and all Eskom plant to be considered as live unit, such liaison is confirmed in writing.
The *Contractor* shall ensure that 2 or 3 of its people are authorised in terms of the plant safety regulations as RP's within 3 months of contract award, should the contractor fail to obtain the authorisation as an RP, Access from the plant will be revoked and Eskom will not be liable for any standing time that the contractor may incur.

11. Security, fire protection and safety

The *Contractor* shall be responsible for ensuring the security of the works, and of his plant, equipment and materials. To that end he shall make adequate provision for access control, lighting and watchman to the works where required.

12. Fire protection

The provision of Eskom's standard NWS 1494 " Fire Prevention and Protection of *Contractor's* premises at New Works sites" shall be applicable. The *Contractor* shall ensure that adequate fire fighting apparatus is provided at all his work sites, and that his staff is trained in the use of this apparatus.

13. Safety and incident prevention

The *Contractor* shall implement and maintain an active Site Safety and Accident Prevention Programme in accordance with the NOSA Standards Safety Regulations, NWS 1058 and the Safety Regulations as laid down in the Matla Safety Manual. The overriding regulations will however be the Occupation Health and Safety Act.

14. Safety

The *Contractor* shall comply with

- The Occupational Health and Safety Act, 1993, and all regulations made there under;
- All Eskom Safety and Operating Procedures.

The *Contractor* acknowledges that it is fully aware of the requirements of all the above and undertakes to employ only people who have been duly authorised in terms thereof and who have received sufficient safety training to ensure that they can comply therewith.

The *Contractor* undertakes not to do, or not to allow anything to be done which will contravene any of the provisions of the Act, Regulations or Safety and Operating Procedures.

The *Contractor* shall appoint a person who will liase with the Eskom Safety Officer responsible for the premises relevant to this contract.

Do safety audits at the *Contractor's* premises, its work-places and on its employees;

Refuse any employee, sub-contractor or agent of the *Contractor* access to its premises if such person has been found to commit any unlawful act or any unsafe working practice or is found to be not authorised or qualifies in terms of the Act;

Issue the *Contractor* with a work stop order or a compliance order should Eskom become aware of any unsafe working procedures or conditions or any non-compliance with the Act, Regulations and Procedures referred to in 1 above by the Contractor or any of its employees, sub-contractors or agents.

The *Contractors* safety file is to be submitted for approval to Matla's Safety Officer within three (3) days after order placement.

15. General

Contractor shall make provision in his rates for all costs involved in compliance with Security Requirements, Fire Protection, Safety and Accident Prevention. Eskom in this regard will entertain no claims for additional compensation.

16. Quality requirements

The *Contractor* shall be required to demonstrate by means of a Quality Plan that this organisation is so structured that all the requirements of the specification will be properly monitored and controlled. The Quality Plan and Control procedures are to be carried out in accordance with the Quality Control document NWS 1841/C1 and the Matla Quality Manual for *Contractor*. The Quality Control document is to be submitted for approval to Matla Engineering within three (3) days after order placement by the *Contractor*.

No work may commence unless the Quality Control document has been approved in writing and a copy submitted to *the Employers Representative*. *The Contractor*, in conjunction with Matla Engineering must sign off all Quality Control documents after completing all work on site. *The Contractor* to submit a copy of the final signed off document to *the Employers Representative* within 1 week after Completion of a Unit.

17. Tender

Tender on the supplied Scope of Work shall be fixed and firm unless otherwise specified. The Tenderers shall include for compliance with all the provisions and requirements of site regulations and procedures in his pricing.

Any work not in the Scope of Work will be carried out only when the *Contractor* has received a signed variation order from Eskom.

Tenders must include for the official “Commissioning” and / or taking over hand handing over” of systems and / or the work executed by the *Contractor*.

17.1. Consumables

The *Contractor* shall allow in his tender price for any consumables that might be required for the execution of the work.

17.2. Transport

The *Contractor* shall make his own arrangements for transport of material and/or personnel on or to site in accordance with the site procedures and regulations.

The tenderer shall include in his tender price for any special tools and equipment to be used on site for the execution of the works.

Non-destructive examination will be deemed to be included in the tender price unless otherwise specified.

The *Contractor* shall allow in his tender price for tests as he considers or might be required by Eskom to satisfy himself that the work is sound.

The *Contractor* shall allow in his tender price for competent full time site supervision for the duration of the Contract.

Scaffold will be deemed to be included in the tender price unless otherwise specified.

Any cranage required for the execution of the Works will be supplied by Eskom if it is available. Should cranage be unavailable the *Contractor* shall negotiate a price with Eskom for the supply thereof. Arrangements for such cranage must be made in advance at least two

weeks prior to the required date. No extension of time and / or claim for standing time will be granted should the *Contractor* not conform with his specification.

Any design from Matla Engineering is only for information additional to the Scope of Work. Tenderers are to be based on the Scope of Work and the specifications. If any discrepancy arises between the design and the Scope of Work Matla is to be contacted for clarification.

Eskom carries no responsibility for unforeseen delays unless such a delay is negotiated within 24 hours of the occurrence and written agreement is submitted by Eskom.

19. Communication

The *Contractor* shall address all communications (after contract award) including telefaximilies to:

Project Manager
Matla Power Station
Private Bag X5012
Kriel
2271

Att :
Tel :
E-Mail :

All communications from the *Contractor* shall carry the Enquiry Number or Contract Number after Contract Award, as well as the Title of the Works. All communication by the *Contractors* shall go through the buyer.

They shall be headed with the subject of the communications, and be numbered sequentially on the basis of the subject of the communication.

No recruiting is allowed on Eskom property. (Eskom property includes the area outside the main security gate).