NEC3 Engineering & Construction Contract

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

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

for Duvha Power Station Additional Offices and Classroom

Contents:		**No of pages**
Part C1	**Agreements & Contract Data**	**[●]**
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Part C4	**Site Information**	**[●]**

CONTRACT No.

Part C1: Agreements & Contract Data

Contents:

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:

Duvha Power Station Additional Offices and Classroom for a period of eighteen months

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 B, C or D	The offered total of the Prices exclusive of VAT is	**R [●]**
Option E or F	The first forecast of the total Defined Cost plus the Fee 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 price list
		W1: Dispute resolution procedure
		X1: Price adjustment for inflation
		X2 Changes in the law
	dispute resolution Option	**X7: Delay damages**
	and secondary Options	**X15: Limitation of *Contractor's* liability for design to reasonable skill and care**
		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:	**Mduduzi Kunene**
	Address	**Duvha Power Station**
	Tel	**+27 13 296 3291**
	Fax	
	e-mail	**KuneneMT@eskom.co.za**
10.1	The *Supervisor* is: (Name)	**Bongi Mathaphuna**
	Address	**Duvha Power Station**

	Tel No.	**+27 13 690 0477**
	Fax No.	**+27 86 537 1547**
	e-mail	**mathapSA@eskom.co.za**
11.2(13)	The *works* are	Duvha Power Station Additional Offices and Classrooms
11.2(14)	The following matters will be included in the Risk Register	**1. Scope change during execution.** **2. Muscles constrains due to handling of heavy equipment.** **3. Unavailability of an AP (Appointed Person) or RP (Responsible Person)** **4. Slipping and falling** **5. Dust (inhalation, skin and eye irritation)**
11.2(15)	The *boundaries of the site* are	**Duvha Power Station additional classes and offices.**
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 refers.**
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**
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	**09 May 2027**
11.2(9)	The *key date*s and the *condition*s to be met are:	***Condition* to be met** / ***key date*** **1 Kick off meeting** — **3 days after contract awarded** **2 Safety file approval** — **7 days after contract awarded**
30.1	The *access dates* are:	**Part of the Site** / **Date** **1 Site Establishment.** — **7 days after safety file approval.** **2. Drawing/Design**

2	**Procuring of material.**	**As per the accepted program and approved milestone.**
3	**QCP, Program & Methodology.**	**QCP, Program & Methodology.**
4	**Program revision.**	**Seven (7) days after safety file approval.**
5	**Execution as per the scope.**	**As per the accepted program and approved milestone.**
6	**Testing and commissioning**	**As per the accepted program and approved milestone.**
7	**De-establishment and hand over**	**As per the accepted program and approved milestone.**

31.1	The *Contractor* is to submit a first programme for acceptance within	**1 week of the Contract Date.**
31.2	The *starting date* is	**1 December 2025**
32.2	The *Contractor* submits revised programmes at intervals no longer than	**3rd week of the month**
35.1	The *Employer* is not willing to take over the *works* before the Completion Date.	[No data needed if this statement is included]

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	**3 weeks.**

5 Payment

50.1	The *assessment interval* is	**between the 25 days 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	**4 weeks**
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)	The place where weather is to be recorded is:	**Duvha Power Station**
	The *weather measurements* to be recorded for each calendar month are,	**the cumulative rainfall (mm)** **the number of days with rainfall more than 10 mm** **the number of days with minimum air temperature less than 0 degrees Celsius** **the number of days with snow lying at 09:00 hours South African Time** **and these measurements:**
	The *weather measurements* are supplied by	**The Contractor**
	The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at:	**Witbank Area**
	and which are available from:	**the South African Weather Bureau and included in Annexure A to this Contract Data**

		provided by the *Employer*
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*.** **Note: If this arrangement is used, delete the rows above for 60.1(13) and delete this note.**
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. Underground cables or piping not shown on the existing drawing or detected during final land survey.** **2. Loss of material during execution e.g., building structures (sheeting, frames etc.), tools and electrical component.** **3. Damage of existing infrastructure during execution.**
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**	
B	**Priced contract with bill of quantities**	
60.6	The *method of measurement* is	**[●] published by [●] and amended as stated in Part C2.1, Pricing Assumptions.**
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	**[●]**
	Tel No.	**[●]**
	Fax No.	**[●]**
	e-mail	**[●]**
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**	
X1.1(a)	The *base date* for indices is	**[●].**
X1.1(c)	The proportions used to calculate the Price Adjustment Factor are:	

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 & 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	**Procuring of material**	**R 50 000,00 per day to a maximum of 10%**
		2	**Delivery of material**	**R 50 000,00 per day to a maximum of 10%**
		3	**Execution Phase**	**R 50 000,00 per day to a maximum of 10%**
	Remainder of the *works*			
	The total delay damages payable by the *Contractor* does not exceed:	**1% per week of the value of each activity not completed capped at 10% of the activity value**		
X15	**Limitation of the *Contractor*'s liability**	**There is no reference to Contract Data in this**		

	for his design to reasonable skill & care	**Option and terms in italics are identified elsewhere in this Contract Data.**
X16	**Retention**	
X16.1	The *retention percentage* is	**10% of the contract value amount**
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**
X18.4	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) One (1) 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*)	Loss of or damage to property *Employer*'s property The replacement cost where not covered by the *Employer*'s insurance

caused by activity in connection with this contract	The *Employer*'s policy deductible, as at 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 law
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 applicable law

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

INSURANCE TABLE B

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]

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

Month	Cumulative rainfall (mm)	Number of days with rain more than 10mm	Number of days with min air temp **<** 0 deg.C	Number of days with snow lying at 08:00 CAT
January	138	11	34 [5]	25 [13]
February	89	7	34 [8]	25 [13]
March	75	7	33 [5]	24 [12]
April	52	5	29 [1]	23 [10]
May	9	2	26 [-6]	20 [6]
June	23	2	24 [-3]	18 [4]
July	6	1	25 [-5]	18 [3]
August	11	2	28 [-6]	21 [5]
September	25	3	31 [-2]	24 [8]
October	96	8	33 [0]	25 [10]
November	120	10	33 [-2]	25 [11]
December	159	10	31 [0]	25 [13]

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

C1.2 Contract Data

Part two - Data provided by the *Contractor*

Notes to a tendering contractor:

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

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

Clause	Statement	Data
10.1	The *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:	**CV's (and further key persons data including CVs) are appended to Tender Schedule entitled .**

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

11.2(3)	The *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			
B	**Priced contract with bill of quantities**			
11.2(21)	The *bill of quantities* is in			
11.2(31)	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).*		
B	**Priced contract with bill of quantities**	**Data for the Shorter Schedule of Cost Components**		
41 in SSCC	The percentage for people overheads is:	**%**		
21 in SSCC	The published list of Equipment is the last edition of the list published by The percentage for adjustment for Equipment in the published list is	**Minus %**		
22 in SSCC	The rates of other Equipment are:	**Equipment**	**Size or capacity**	**Rate**
61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are **Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates.** **Please insert another schedule if foreign resources may also be used**	**Category of employee**		**Hourly rate**
62 in SSCC	The percentage for design overheads is	**%**		

63 in SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:	

PART 2: PRICING DATA
ECC3 Option B

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

C2.1 Pricing assumptions: Option B

How work is priced and assessed for payment

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

Identified and defined terms 11 11.2

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

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

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

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

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

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

Function of the Bill of Quantities

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

Guidance before pricing and measuring.

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

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

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

the Fee only if the *Contractor* and *Project Manager* agree. If they are unable to agree, then Defined Cost plus Fee is used.

Measurement and payment

Symbols

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

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

General assumptions

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

The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the Contractor in carrying out or providing that item.

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

The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. The quantities of work assessed and certified for payment by the Project Manager at each assessment date will be used for determining payments due.

The short descriptions of the items of payment given in the bill of quantities are only for the purposes of identifying the items. Detail regarding the extent of the work entailed under each item is provided in the Works Information.

Departures from the *method of measurement*

Amplification of or assumptions about measurement items

tem No.	SANS Ref.	Description	Unit	Qty	Rate	Amount
1	**SANS 1200 AA**	**Preliminary and General**				
1.1		Health and Safety requirement	Sum	1		
1.2		Site Establishment	Sum	1		
1.3		Site De-establishment	Sum	1		
1.4		Tools and equipment	Sum	1		
1.5		Other (specify below)	Sum	1		
		a)				
		b)				
2		**Civil Structures Scope of work**				
2.1		**Site Clearance**				
		a) Remove all dirt's, weeds and any other obstructions in the area and correctly dispose into the skips as per scope of work.	m^2	1350		
		Scan the ground to detect present underground services before excavation work can start	m^2	50		
3		**Placement and positioning of Park homes**				
3.1		Survey the areas to determine correct levels of placing the buildings, provide two survey reports (pre and post positioning)	No	2		
3.2		Supply and install adjustable mechanical jacks similar to the existing on site as per scope.	No	15		
4		**Demolition work**				
4.1		Pack and remove all valuable items such as furnisher, equipment, papers etc., store items in a storage place as provided by the Project manager	Sum	1		
4.2		Identify and isolate all services to and from the building (electrical supply, Sewer, water supply, e.tc)	Sum	1		
4.3		Remove all existing air conditioning system and place them in a storage area provided by the Project Manager	Sum	1		
4.4		Entirely demolish the existing transport park home (Roof, walls, floor, e.tc)	m^2	426		
4.5		Clean and prepare area for the placement of the new park home	Sum	1		
4.6		Partly demolish the internal walls in the new park homes as indicated by the Engineer to align with the proposed layouts	m^2	250		
5.7		Remove old Air-conditioning system and patch the openings on the wall with flat metal sheets. Seal with silicon around or water proof sealant.	No	40		
5		**Partitioning Work**				
5.1	**SANS 266** **SANS 10305**	Supply construct and install a non-bearing dry wall of plasterboards of level 6 with timber studs wall framing partitioned as per scope of work (section 4.1.1) and layouts Supply, prepare and paint the par homes as per scope of work (surface preparation and finishing) a) Internal walls surface painting as per scope b) External wall surface painting as per scope	m^2 m^2 m^2	300 1450 1200		

		c) Ceiling painting as per scope	m^2	730		
6		**Plumbing work**				
6.1		Supply and install portable water supply with fittings and accessories as per scope of work				
		a) Excavation for pipe installation	m^3	15		
		b) Removal of existing reinforced concrete floor estimated to be 150mm thick for water pipe supply	m	50		
		c) Supply, lay and installation 15mm of class 16 high density polyethylene pipes for the supply of portable water	m	150		
		d) Supply and install 15mm nominal diameter stainless steel flexible water supply pipes to kitchen sinks and bathroom water basins	m	50		
		e) Rehabilitation of excavated areas	m^3	15		
		f) Rehabilitation of broken concrete slab	m^3	3		
6.2		Supply and install sewer drainage system with fittings and accessories as per scope				
		a) Excavation for pipe installation	m^3	20		
		b) Removal of existing reinforced concrete floor estimated to be 150mm thick for sewer drainage pipe	m	50		
		c) Supply and install 110mm nominal diameter of white PVC or equivalent pipes for black water.	m	100		
		d) Supply and install 50mm nominal diameter of white PVC or equivalent pipes for grey water	m	50		
		e) Rehabilitation of excavated areas	m^3	20		
		f) Rehabilitation of broken concrete slab	m^3	4		
6.2		Supply and install new complete set of 150 L Franke/Kwikot combi slim electric geysers or similar specification, including all fitting and accessories as per scope	No	6		
6.3		Supply and install new complete set of bathroom toilet suites with fittings and accessories as per scope of work	No	15		
6.4		Supply and install new complete set of white porcelain, Amber wash hand basin with wooden pedestals as per scope of work	No	11		
6.5		Supply and install new complete set of stainless-steel kitchen double sink basins as per scope of work	No	4		
6.6		Supply and install new taps				
		a) Kitchen sink	No	4		
		b) Bathroom basin	No	11		
6.7		c) Supply and install new urinal units	No	6		
7		**Carpentry Work**				
7.1		Supply and install new kitchen cupboards, including fittings and accessories as per scope of work.	m^2	170		
7.2		Replacement of access doors				
		a) Supply and install new external doors with set of locking mechanism as per scope	No	4		
		b) Supply and install new internal doors with set of locking mechanism as per scope	No	10		
		c) Supply and install foldable doors with frame for bathroom	No	8		
7.3		Floor work as per scope of work				
		a) Supply and install laminated Kindle-Stone Grey or similar wood flooring including connection and finishing profiles and other accessories for offices, boardroom and reception area	m^2	630		

		b) Supply and install water and dirt resistant vinyl coated tiles in the kitchen and toilet flooring including connection and finishing profiles	m^2	100			
		c) Supply and install premia skirting 15 x 80 mm Columbia or similar	m	600			
8		Supply and install new blinds on all office and boardroom windows (1200 x 1000) as per scope of work	No	48			
9		Supply and install new bathroom mirrors as per scope of work	No	10			
10		Construct Interlocking brick paved walkway as per scope of work					
		a) Remove 150mm topsoil for the walkway from the offices to the existing paved area	m^2	150			
		b) Import material, lay and compact on the walkway	m^3	35			
		c) Supply and install interlocking paving bricks, type S-A blocks of 80mm thick size	m^2	150			
		d) Supply and lay up straight precast side kerbs on the walkway	m	300			
11		Supply and install 0.6mm thick IBR sheeting to cover the bottom elevated area all around the park homes. IBR sheeting shall be painted with royal blue to match existing colour	m^2	290			
12		**Shade Canopy for doors**					
12.1		Supply and install 76mm OD with 8mm thick galvanised circular hollowed section columns of 3m long	No	64			
12.2		Supply and install 70x70x6 angle galvanised equal leg angle irons of 2,5m long beams	No	64			
12.3		Supply and install 60x60x4 angle galvanised equal leg angle irons of 2,5m long beams	No	32			
12.4		Supply and install Galvanised IBR sheeting of 762mm x 0.8mm with consumables.	m^2	160			
12.5		Excavate 400x 400 x500mm for concrete footings	m^3	24			
12.6		Cast 30 Mpa of concrete as per scope of work	m^3	24			
12.7		Testing of Concrete strength	Sum	1			
12.8		Supply and install new multiwall awning of 1500mm x 1000mm	No	6			
13		**Staircases at the entrances**					
13.1		Supply and provide precast concrete blocks to be placed underneath the existing steel staircases at least 150x150x 50mm blocks	No	32			
13.2		Refurbish the exiting staircases as per scope of work	No	8			
19		**Split Air-conditioning units**					
19.1		Supply and install split air- conditioning units with connection accessories with consumables as per the scope of work;					
		a) 18000 BTU Hi wall split	No	31			
		b) 24000 BTU Hi wall split	No	12			
20		Electrical works					
20.1		Assess all electrical wiring in the building and issue a certificate of compliance	Sum	1			
20.2		Supply and install main distribution board which is fitted with the following	No	1			
	Aux maintenance	a) Main switch	No	1			
		b) Earth leakage relay	No	1			

20.3		c) 30 Amps miniature circuit breaker (MCB) for double plugs	No	12		
		d) 15 Amps miniature circuit breaker (MCB) for lights	No	10		
		e) Earth leakage	No	1		
		f) MCB for each air conditioner (30 Amps)	No	12		
20.4	**Training classrooms**	a) Main switch	No	1		
		b) Earth leakage relay	No	1		
		c) 30 Amps miniature circuit breaker (MCB) for double plugs	No	23		
		d) 15 Amps miniature circuit breaker (MCB) for lights	No	13		
		e) Earth leakage	No	1		
		f) MCB for each air conditioner (30 Amps)	No	23		
	Transport Park home	a) Main switch		1		
		b) Earth leakage relay		1		
		c) 30 Amps miniature circuit breaker (MCB) for double plugs	No	17		
		d) 15 Amps miniature circuit breaker (MCB) for lights	No	11		
		e) Earth leakage	No	1		
		f) MCB for each air conditioner (15x 15 Amps and 3x 30 Amps)	No	8		
				Sub-Total		
				Vat		
				Total		

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

Contents

PART 3: SCOPE OF WORK

C3.1: EMPLOYER'S WORKS INFORMATION

Refer to Appendix 4

Description of the *works*

Executive overview

Duvha Power Station has a shortage of office space for Heavy Maintenance Department (HMD) Auxiliary sections, Transport department and Classrooms for training department. There are existing park homes that are currently located in different areas in the station. Three of these park homes are placed next to the old simulators building, two are placed between HMD workshop and coal staithes 2 and two are placed between cooling tower 2 & 3. One of the park homes between cooling tower 2&3 shall be moved and transported to Transport department after demolition of the existing transport department park home. Each park home consists of 6 partitioned bedrooms of (3.4m X 3.1m floor plan/bedroom), 3 of bathrooms for ablution and an open area kitchen. These bedrooms are intended to be used as offices to accommodate Eskom employees from the departments at Duvha Power Station. The buildings are required to modify to suit the need for offices and classrooms.

Duvha Power Station is currently not complying with the Occupational Health and Safety (OHS) Act and Regulations. Facilities regulations states that every employer shall maintain all rooms and facilities which are prescribed or provided for, in terms of the provisions of these regulations, in clean, hygiene, safe, whole and leak-free condition, and in good state of repair. The scope herein is for the erection of the new offices and classrooms with sanitation, electrical and Heat Ventilation and Air-Conditioning services to ensure the offices comply with the OHS Act and Regulations.

3 CONSTRUCTION

The Contractor is responsible for the construction of the works, including all temporary works and design thereof, and all associated services in accordance with the detailed drawings and specifications.
The Contractor disposes of all demolished waste at a designated waste disposal bins on site as indicated by the Project Manager. The waste disposal site is selected to suit the classification of the materials to be disposed of. All hazardous waste such as asbestos shall be disposed at Licenced disposal waste sites and certificates of disposal are required to be submitted to the Employer.

3.1 CIVIL AND STRUCTURES SCOPE

3.1.1 Preparations and site clearance

- Remove all dirt weeds and any other obstructions in the area and correctly dispose into the skips.
- The project manager is responsible to provide waste bins/skips for disposal of any rubble, or waste however the contractor shall indicate the reasonable amount of waste bins required.

3.1.2 Positioning of the building

- Survey the areas to determine correct levels of placing the buildings.
- Ground slope shall not exceed a ratio 100mm: length of the buildings.
- Supply and install adjustable mechanical jacks similar to the existing on site to be
- positioned not more than 2.5m between the lengths of the building for placement of the buildings.
- Jacks shall be placed on top of precast concrete blocks to create a stable footing.
- Buildings shall be positioned in accordance with the attached layouts.

3.1.3 Demolition works.

- The personnel occupying the building shall evacuate and remove all valuable items prior demolition of the buildings.
- Inspection shall be conducted between the client or client's representative and the contractor to identify material and equipment that are still in good condition to be re-used in future.
- Items that are still in good condition shall be remove first and stored in a designated location as instructed by the Project Manager.

- All electrical supplies shall be isolated from the main power supply as per the plant safety regulations (PSR) for transport department.
- The electrical components that will not be re-used should be disposed as per Duvha Power Station Waste Management procedure (ENVP0005). These components include power cables, wall socket, distribution boards and lights.
  Water supply shall be isolated from the main source as indicated by the Engineer.
- Sewer services towards the discharge points shall be blanked off as Instructed by the relevant Engineer.
  All waste services and drains such as sewer shall be flushed off before disconnecting.
- All open ends of services such as electrical main supply, water supply and sewer lines shall be closed and protected from being damaged.
  All IT cables shall be removed from the buildings prior demolition.
  Carefully remove all the air-conditioning system from the buildings.
  Removal of the split air-cons shall be done by a qualified refrigeration technician.
  Refrigeration Technician proof of trade shall be provided.
  The old air-cons shall be taken to Stores to a redundant yard.
  The area shall have a solid barricade prior any demolition work starts.

Remove furniture and electrical appliances from the building before demolition starts.

- All Station assets items shall be taken to Duvha storage area as instructed by the Project Manager
- Fully demolish the existing park home and prepare the area for the new park home to be placed in.

The contractor shall provide dust and ground pollution prevention and mitigation plan to the project manager for review and approval.

- Partly demolish the existing internal walls on the new park homes for the preparation of rearrangement of the offices and classrooms.

3.1.4 Partitioning Wall

All portioning walls shall be in accordance with the layout drawings attached.

- Supply and install a non-bearing dry wall of plasterboards of level 6 with timber studs wall framing partitioned as per attached layouts.
- Partition walls shall include all accessories such as trimming between the walls and the floor tiles, mounting brackets, corner connectors and skirting.
- Standard grade plaster board must be manufactured in accordance with the latest edition of SANS 266:2003 consisting of aerated gypsum core bonded to durable paper liners with unprinted liner.
- Fire Retarded Plaster board manufactured in accordance with the latest edition of SANS 266:2003 Edition 2.2 consisting of aerated gypsum core with suitable additions fibreglass stands and un-exfoliated vermiculite bonded to durable paper liners with unprinted liner.
- Moisture Resistant Plasterboard – Standard Plaster board manufactured in accordance with the latest edition of SANS 266:2003 Edition 2.2 consisting of aerated gypsum with special additive core bonded to durable impregnated green paper liners with unprinted liner.
- The timber studs to be 70mm x 50mm sets with the greater dimension perpendicular to the wall.
- All vertical studs shall be spaced at centres of 500mm.
- All horizontal studs shall be spaced at centres of not more than 1000mm.
- Maximum distance between fixings shall be 300mm.
- The Drywall Partitions and lightweight internal walls shall be installed in strict adherence to the material manufacturers' recommendations.
- All Requirements and tolerances shall be referred to Table 1 and 2 of SANS 266

- Partitioning walls shall be sealed with the existing ceiling with silicon passed product accordance with manufacturer's instructions.
- Walls and Ceiling walls shall be painted with gloss enamel (colour preferred colour to be

provided by the client) to comply with SANS 10305: part 1 to 4.

- Reinforcement of open plan and boardroom roof structure shall be made to support the ceiling.

3.1.5 Plumbing
3.1.5.1 Portable water supply

- Supply and install class 16 high density polyethylene pipes for the supply of portable water from the nearest water source (fire hydrant) to the buildings.
- The contractor is responsible for the supply of all consumables, fittings and connection accessories required.
- Supply and install 15mm nominal diameter stainless steel flexible water supply pipes with isolating valves for each pipe to be connected from the building main wall to basins, toilets and kitchen sinks for cold and hot water.
- Supply and install PEM twist and lock range of fittings or equivalent.
- Pipe size shall be of 15mm nominal diameter installed from the water source to the building laid underground with a minimum soil cover of 200mm.
- The excavated soil shall be reused for backfilling after laying the pipe.
- Isolation valves shall be installed after the tap-off point from the main water supply course.
- Plumbing system pressure tested to 10 bar.
- Pipes shall be certified in accordance with SANS 15875

3.1.5.2 Drainage pipes

- Excavate to lay new drainage pipes; the contractor shall make provision for breaking of reinforced concrete slab of +/- 150mm thickness for HMD offices. The concrete slab shall be repaired after laying the drainpipe.
- Scan the ground to detect present underground services before excavation work can start.
- Supply and install 110mm nominal diameter of white PVC or equivalent pipes for black water. Pipes to be installed from the buildings to the nearest main sewer manhole with a constant grade of 2% slope.
- Excavation of drainpipes shall have a minimum soil cover of 300mm for backfilling where possible.
- Excavated material shall be used for backfilling in layers not exceeding 150mm thickness.
- Modify the existing sewer manholes on the side walls to connect the new sewer drain pipes, the manholes shall be sealed with concrete grouting around the pipe in the points of connection.
- Supply and install connection fittings and accessories for drainage pipes.
- Supply and install 50mm nominal diameter of white PVC or equivalent pipes for grey water. The pipes to be connected from the sinks, hand wash basins and urinary system to the main 110 nominal diameter pipes by means of connection fittings and accessories.
- 45° bends shall be used on all vertical and horizontal for joints when joining pipes into the main building main drain line.

- 90° bends shall be installed for toilets, basins, and kitchen sinks.
- Accessories to include cleaning and inspection eye on pipe bends.
- Dished Gullies
- S-type water traps for basins and kitchen sinks
- 45° plain junctions for connections

3.1.5.3 Replacement of Geysers (hot water heaters)

- 150 L Franke/Kwikot combi slim electric geysers or similar specification;
- Supply of geysers shall include all connecting and installation accessories and fittings.
- Each geyser shall have Pressure safety valve, drainpipes and geyser tray
- Certified in accordance with IPX4 International standards.
- ISO 9001 and SABS SANS 151 Approved.

3.1.5.4 Supply of Toilet suite

- Supply, install and connect.
- Ceramic close couple cistern or equivalent;
- Cistern - SABS Certified Mark No: 1182/2512 SANS 821
- Capacity 9 litres with left or right-side inlet flush handle;
- Afsan low level pan or equivalent;
- Toilet seat - B2 seat and cover

3.1.5.5 Replacement of Basins

- White porcelain, Amber wash hand basin with pedestal;
- Install new kitchen double sink basins.

3.1.6 Replacement of Taps

- Cobra mixers taps;
- In accordance with SANS 226 Type 2;

3.1.7 Carpentry

3.1.7.1 Installation of Kitchen cupboards

- Supply and install new built in cupboards to comply with the requirement of SANS 1385
- Material shall be laminated wood with scratch resistance
- Cup boards shall have double doors cabins for plates and cups as well as 4 shelves
- Cupboards layout shall make provision of single leaf door fridge.
- The Cupboards type shall be combination unit cupboards;

- Painting shall comply with section 3.2.6 of SANS 1385
- Fittings, handles, fasteners, catches, clips, and washers shall comply with section 3.2.10 of SANS 1385
- Cupboards edges shall be of type 6: PVC edge strips.
- The contractor shall submit product catalogue to the client to select preferred colours and textures.

3.1.7.2 Replacement of Doors

External & Internal

- 40mm thick door panel cut from standard Kwik space PU wall panel;
- Standard size of 2032mm x 813mm;
- Each door framed with 0.5mm pre-painted galvanised capping riveted to door panel;
- Natural anodised aluminium rebated door frame including rubber buffers and heavy duty aluminium hinges.
- Pre-painted galvanised drip rail to doors opening outwards;
- External locks are five lever locks complete with stainless steel striker plate and two keys; Chrome plated handles or Equivalent.
- Installation of trellidor security burglar doors or similar product in all external doors.

3.1.7.3 Flooring

Offices, Boardrooms & Reception area

- Supply and install laminated Kaindl-Stone Grey or similar wood flooring including connection and finishing profiles and other accessories required in accordance with SANS 2001 CT1.
- Supply and install premia skirting 15 x 80 mm Columbia.
- Authentic Oak Ash White or similar colour.
- The floor shall be cleaned and prepared for the installation of the laminated wood flooring.
- The contractor shall submit product catalogue to the client to select preferred colours and texture of the floor.

Kitchen and Toilets

- Supply and install water and dirt resistant vinyl coated tiles in the kitchen and toilet flooring including connection and finishing profiles and other accessories required in accordance with SANS 2001 CT1.
- Supply and install premia skirting 15 x 80 mm Columbia.
- Reclaimed Oak Brown colour or similar.
- The floor shall be cleaned and prepared for the installation of the vinyl.
- The contractor shall submit product catalogue to the client to select preferred colours and texture of

the floor.

3.1.8 Fittings

Replacement of blinds

- Supply and install blinds type B, to comply with SANS 947
- Blinds for windows must be royal blue in colour in accordance with SANS 1091.
- Vertical type of blinds is preferred.

Mirrors

- 3mm silvered float copper backed glass with exposed chromium plated corner brackets fixed to panels; standard sizes - 300 x 300mm high.

3.1.9 Walkways

- Remove 150mm topsoil for the walkway from the offices to the existing paved area.
- Walkway path is shown on the building proposed layouts.
- Import material, lay and compact on the walkway.
- Compaction shall reach 95% of Mod Aashto
- Supply and install interlocking paving bricks, type S-A blocks of 80mm thick size.
- The walkway shall be locked on the edges with vertical straight concrete kerbing for paving blocks to prevent looseness.
- The Walkway shall be elevated from the ground of about 100mm to prevent flooding during rainy seasons
- Walkways shall have a minimum of 1.2 width.

3.1.10 Shade Canopy for doors

Main entrance

- Supply and install 76mm OD with 8mm thick galvanised circular hollowed section columns of 3m long.
- Supply and install 70x70x6mm angle galvanised equal leg angle irons of 2,5m long beams.
- Supply and install 60x60x4mm angle galvanised equal leg angle irons of 2,5m long beams
- Supply and install Galvanised IBR sheeting of 762x0.8mm with consumables.
- All structural connections to be welds all around fillet welds of 5mm.
- Excavate and cast 25MPa with 19mm stones concrete for foundation footings.
- Columns to be cast in concrete.

- Column foundations to be (400x 400x 500mm)

Welding requirements

- NDTs shall be conducted as per 240-83539994 - Standard for Non-Destructive Testing (NDT) on Eskom Plant.
- Welding shall be conducted as per 240-106628253 Standard for Welding Requirements on Eskom Plant.

Awning shade

- Supply and install new multiwall awning of 1500mm x 1000mm on all emergency exit doors.

3.1.11 Staircases for external doors

- Provide precast concrete blocks to be placed underneath the existing steel staircases.
- Refurbish the existing staircases as follows;
  - Prepare and sandblast the steel structures
  - Apply corrosion protection as per specification CPS 01 stipulated in the Eskom Standard 240-106365693 -Standard for External Corrosion Protection of Plant Equipment and Associated Piping with Coatings.
- The contractor shall ensure that the corrosion protection standard mentioned herein is adhered to, it is the contractor's responsibility that they study and understand the standard. All clarification required shall be done prior to execution of the works.
- Each staircase has the following components or members;
  - 4 columns of 40x40x3 angle iron mild steel of 800mm long each
  - 6 footing of 100x100x3 flat bar mild steel
- 4 beams of 40x40x3 angle iron mild steel of 1200mm long each
- 1 vastrap plat plates of 1200x1200x3 as platform
- 2 diagonal beams supporting steps 40x40x3 angle iron mild steel of 1300mm long each.
- 4 vertical hollow section of 25x25x3 with a length of 1000mm long each
- 4 horizontal hollow section of 25x25x3 with a length of 1200mm long each
- 2 Diagonal hand railing hollow section of 25x25x3 with a length of 1300mm long each.
- 4 vastrap plates of 1200x250x3 for steps with welded flat bars of 230x20x3 on both sides of the plates.
- The vastrap shall be bended on both sides as shown in the drawing to avoid sharp edges.

3.2 HVAC SCOPE OF WORK (SPLIT AIR-CONDITIONING UNITS)

- Installation of the unit to be done in accordance with OEM requirements. The indoor units shall be installed by using secure and adequate supports. Allow adequate drop for condensate drainage.
- The indoor unit position shall be verified on site by the project manager and the Contractor.
- The outdoor unit shall be installed level and securely on galvanised / powder coated brackets against the wall. Brackets shall be 800mm to 1000mm above floor level. Outdoor unit can also be installed level and securely on concrete slabs or brackets. Brackets or slabs to be supplied by Contractor. Position shall be verified on site by the project manager and the Contractor.
- Pipe work inside the building shall be inserted neatly inside white PVC trunking. Trunking shall be fixed to the wall with screws – not double-sided tape.
- Pipe work outside the building shall be inserted neatly inside grey 75 x 75 mm PVC trunking. Trunking shall be fixed to the wall with screws – not double-sided tape.
-
- Trunking shall be very neat especially at ends, corners and joints. Trunking shall always be horizontal and vertical level.
- Condensate drain shall lead to the building drain via 20 mm white PVC conduit and saddled. Spacing between saddles shall not exceed 500 mm. Flexible conduit may be used.
- All excess gaps drilled into the offices shall be properly sealed by the contractor. Use of expansion foam is acceptable; however, it must be neat.
- The drainpipe slope shall be adequate for condensate drainage. The integrity of the drains must be. checked and proven to Eskom.
- Only new refrigerant grade copper tubing fittings shall be used. The use of aluminium tubes is not allowed.
- Copper pipes may not be damaged or kinked in any way.
- All refrigerant copper tubing shall be insulated separately with amerflex, all the way between the indoor and outdoor units.
- The refrigeration system shall be leak-free – Pressure testing to be conducted in line with OEM installation requirements
- Pressure test with dry nitrogen shall be witnessed by the client.
- The refrigerant system shall be properly evacuated in line with OEM specifications. Vacuum test to be witnessed by the client.
- The correct charge of suitable refrigerant shall be charged – to be witnessed by the client.
- Only qualified refrigeration technicians shall do the installation – proof of Safe Handling of Refrigerants competency must be provided. I. Refrigeration CoC (certificate of compliance) shall be issued for every installation.
- Comprehensive commissioning report shall be handed over to the project manager.
- The Operator manuals and remote controls shall be handed over to the project manager.
- The workmanship shall carry a 1-year unlimited warranty.
- Basic training on air condition operations, i.e., Remote control

Notes:

Where new split unit is installed to replace an old window unit the following shall apply

I. The complete old air conditioner unit shall be removed – indoor and outdoor units without any damage caused to old equipment and handed over to the project manager.
None of the old copper pipes, wires, brackets or trunkings may be re-used if applicable.

II. Repair the area where the old unit was removed by using similar material of construction used on that same building. Plug excess holes, etc.

III. All the old equipment remains the property of Duvha Power Station and need to be handed over.

V. See Annexure: A1 for air conditioning unit's specifications.

3.2.1 Refrigerant piping system

- The refrigerant piping system is to have the following minimum requirements:
- The necessary traps to be installed in the refrigerant lines to ensure oil return for applications where the outdoor unit is installed higher than indoor unit.
- Flare connections to be used at the indoor and outdoor unit.
- Three-way valves with service port are to be installed at the outdoor unit for connection of standard refrigerant pressure gauges.
- Fit a filter in the liquid line with a sight glass and moisture indication thereafter.
- Provide facilities for charging the units with refrigerant and measuring the refrigerant pressures of the unit using standard refrigerant gauges.
- Units which are not pre-charged are to be evacuated to a vacuum of not less than 4mm Hg before charging.
- The insulation for the refrigerant piping to be of the "ultra-violet resistant" type. Insulation exposed to outside weather to be finished off with ultra-violet resistant plastic tape or paint.
- Contractor to issue refrigeration CoC after the completion of the works.

3.2.1.1 Condensate Drainage

Drainage of condensate from the units to be collected by the following means:

- A pan of sufficient size to catch all condensate which may emanate from the unit.
- Drainage via gravity feed from this pan to a suitable connection; or booster pump assisted drainage where indicated on the relevant drawings or in the accompanying schedule.
- The drain pans to be fabricated from PVC piping.
- Drain piping to be fixed and routed to the nearest suitable drain point to ensure positive drainage.
- Drain piping to be resistant or protected against weather elements or people traffic.

3.2.2 Electrical

The electrics and controls are to have the following minimum requirements:

- All electrically powered elements within the unit to have an adequate resistance to earth, with due regard to the possible condensation of moisture and comply with statutory requirements.
- Interconnecting wiring from the outdoor unit to the indoor unit is to be via conduits or suitable special cable.
- Power supply from the local isolator is to be protected against the elements by means of conduit or suitable cable.
- Confirm adequacy of the power supply at equipment submission stage.
- Power supply cable to the isolator shall be in white PVC trunking. Whenever the original power cable of the air conditioner unit is too short; the Contractor shall remove it from inside the air conditioner unit's terminals and replaced it with a suitable sized longer cable. Trunking shall be fixed to the wall with screws – not double-sided tape.
- Installation to comply with SANS 10147-1:2017 requirements
- No joints are allowed on any electrical wiring between the indoor and outdoor unit.
- Contractor to supply lockable and waterproofed isolator for each unit. These isolators shall be mounted on the outside of the building.
- Preferred brand Carrier/Mitsubishi

3.2.3 Commissioning of the system

Commissioning is to be done in accordance with OEM requirements and commissioning reports to be issued to the Employer after completion of the project during the handover phase. Commissioning reports shall have to be submitted as part of the QCP file/ package.

3.3 ELECTRICAL SCOPE OF WORK

- The Contractor shall delivery, procure, transport, install all the required electrical components etc.
- All the wiring in the park homes must be decommissioned by the Contractor.
- The Contractor must verify if the DBs are still functional in the park homes, and if not, they shall be decommissioned.

- It is the Contractor's responsibility to issue the CoC for the electrical installation in compliance with SANS 10142-1.
- It is the Contractor's responsibility to ensure that all the park homes wiring comply with SANS 10142-1

  - Main distribution board – All circuits labelled as per SANS 10142-1
  - Double pole main circuit breaker for single phase/ three poles for three phase. Breaker size/current will be determined by the loading in the building.
  - The rated earth leakage tripping current (rated residual current) required to activate an earth leakage protection device shall not exceed 30mA.
  - All the circuits that supply socket-outlets shall have the earth leakage protection.

- The insulation resistance test on wiring and components shall be performed as per SANS.
- The resistance of the earth continuity circuit to earth shall not exceed 0,2 ohms.
- Earth terminal connected to the supplier's earth; earth wire size depends on cable/load to park home.
- Surge protection to protect equipment against overvoltage.
- Main distribution board should be fitted with the following.

  i. Main switch,

  ii. earth leakage relay,

  iii. 20x 30Amps miniature circuit breaker (MCB) for plugs,

  iv. 26x 15Amps for lights, earth leakage,

  v. MCB for each air conditioner.

- The following areas below should be fitted with one switch for lights and one plug for electrical appliances.

  i. Each office,

  ii. Boardroom,

  iii. Kitchen,

  iv. Passages

- 20x 30Amp MCB for plugs, 24x 10Amp MCB for lights
- Wiring to be provided from the point of supply to the point of consumption.
- MCB per air conditioner, depending on rated current of the air conditioner.
- Voltage drop from main supply to the distribution board must be less than 5% of the supply voltage.
- Additional lighting required to be standardised with the lights that are currently installed on the park home.
- The quantity of the additional lights should be determined by the contractor based on the lux that is required for the area.
- The number of lights to be installed must depend on the size of the area to be occupied.
- The distribution board should have a drawing with all the circuits and their designation.
- All conductive water pipes earthed.

3.4 *Employer*'s objectives and purpose of the *works*

The purpose of this project is to transport, supply positioning, erecting and installation of the prefabricated buildings which is park homes for offices and classrooms in Duvha Power Station.

3.5 Interpretation and terminology

3.5.1 The following abbreviations are used in this Works Information:

Abbreviations

Abbreviation	Description
SANS	South African National Standards
SABS	South African Bureau Standards
SE	System Engineer
SHEQ	Eskom Safety, Health, Environment and Quality
QA	Quality Assurance
QM	Quality Manual
QC	Quality Control
NDT	Non-destructive test
IWE	International Welding Engineer registered with IIW
IIW	International Institute of Welding
IWP	International Welding Practitioner registered with IIW
IWS	International Welding Specialist registered with IIW
IWT	International Welding Technologist registered with IIW

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

3.5.2 Normative Reference Standards

1] ISO 9001 Quality Management Systems.

[2] ENVP0005 - Duvha Power Station Waste Management procedure

[3] 240-107981296, Constructability Assessment Guideline

[4] 240-53114186, Project/ Plant Specific Technical Document and Records Management Procedure

[5] 240-86973501, Engineering Drawing Standard

[6] National Environmental Management Act, 1998 (Act 107 of 1998)

[7] National Environmental Management Waste Act, 2008 (Act 59 of 2008)

[8] SANS 2001, Construction Works (All applicable parts)

[9] 32-727 - Eskom Safety, Health, Environment and Quality (SHEQ) Policy

[10] Occupational Health and Safety Act No. 85 of 1993.

3.5.3 Informative Reference Standards

11] 474-58 (Rev1): Document and Records Management

[12] 240-53113685, Design Review Procedure

[13] 240-53113953, Manage Engineering Accountability Procedure

[14] 240-53114002, Engineering Change Management Procedure

[15] 240-53114026, Project Engineering Change Management Procedure

[16] 240-56364545, Structural Design and Engineering Standard

[17] 240-76992014, Project/Plant Specific Technical Documents and Records Management Work Instruction

[18] 240-55714363 Coal fired power stations lighting and small power installation standard.

[19] 240-56227443 Generation requirements for control and power cables for power stations standard

[20] SANS10142-1 The wiring of premises Low voltage installations.

[21] 240-75850027: Design Guideline for HVAC in the Eskom Coal Fired Power Stations

[22] 240-102547991: General Technical Specification for HVAC Systems

3.6 Management and start up.

3.6.1 Management meetings

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Kick off meeting, implementation strategy	One off 60 minutes (Time to be announced by Project Manager)	Project Managers office	PM, System Engineer and contractor
Risk registers and compensation events	As and when required	Project Managers office	PM, System Engineer and contractor
Overall contract progress and feedback	Monthly on Monday at 09:00am	Project Managers office	*PM. Contractors' Manager*
Commissioning	Once off	Project Managers office and Site	PM. Contractors' Manager & Supervisor
Title and purpose	Approximate time & interval	Location	Attendance by:
Risk register and compensation events	Weekly on _____ at ___		
Overall contract progress and feedback	Monthly on _____ at ___		*Employer*, *Contractor*, *Supervisor*, and ___

2) Meetings of a specialist nature may be convened as specified elsewhere in this Works Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the works.
3) Records of these meetings shall be submitted to the Project Manager by the person convening the meeting within five days of the meeting.
4) All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting.
5) Such minutes or register as in point 4) shall not be used for the purpose of confirming actions or instructions under the contract as these shall be done separately by the person identified in the conditions of contract to carry out such actions or instructions.

3.6.2 Documentation control

1) All formal communication between the *Employer* and the *Contractor* shall take place through the *Employer's Buyer prior contract awarding stage. Once the contract is awarded communication shall take place through the Project Manager (PM)*
2) All formal communication shall be marked with the date and a reference code in the form DVP-XXX-nnn where:
   i. XXX is the acronym of the *Contractor*
   ii. nnn is the sequential number of the communication
3) All formal communication must be acknowledged by the recipient
4) The *Contractor 's* site manager must keep a daily log, which needs to be signed by the Employer's Supervisor daily

3.6.3 Health and safety risk management

The *Contractor* shall comply with the health and safety requirements contained in this Works Information.

The *Contractor's* personnel is to undergo Safety Induction Training at Duvha prior to commencement of this contract and all the relevant Documentation is to be approved by Safety Officials and the Project Manager before any activities can be started on site.

1) The Contractor complies with the requirements of the Duvha Power Station Safety, Health & Environmental Specifications SAS 0012: Duvha Power Station Contractors safety manual
2) The documents are completed by the Contractor's and submitted to the Employer before taking possession of the works.
3) These documents are valid for the duration of the works.
4) The Contractor and all his personnel attend a Health and Safety Induction Course prior to starting with the works.
5) The induction course is presented by the Safety Risk Department at Duvha Power Station.
6) The Contractor makes arrangements with Safety Risk Management at telephone number 013-690-0143.
7) The Contractor submits all the documents as indicated in the Safety, Health & Environmental Specifications relevant to the work to Safety Risk Management before the induction course.
8) The Contractor completes all appointments required and ensures that the appointee and appointees fully understand their responsibilities and are competent and trained to execute their duties.
9) The appointees/appointee ensures that all duties are carried out and records are kept by the Contractor for review/audit by the Employer or Inspector of Machinery.
10) Management has the right and authority to visit and inspect the Contractor's workplace or Site establishment.
11) The Contractor supplies and ensures that his employees wear the necessary PPE according to the risk assessments performed on the specific tasks to be carried out.
12) The Contractor ensures that everyone entering Duvha Power Station under his supervision is medically, physically and psychologically fit to enter Duvha Power Station.

13) The medical examination, at the Contractors cost, is carried out by a Registered Professional Occupational Health Practitioner and the examination shall include the following tests:
    i. Eye Test, Blood Pressure,
    ii. Heart Function,
    iii. Hearing Test and
    iv. Lung Function.
14) A thorough examination is done and previous physical injuries, as well as occupational diseases/complications are covered.
15) If at any point in time during the execution of the works, the Contractor has a radiation-related incident/exposure, the onus is on the Contractor to immediately notify the Employer, the Medical Station, the Risk Manager and the Safety Risk Management Department.
16) The onus thereafter is for the Contractor to immediately arrange, at his/her cost, for blood samples to be taken by a Registered Laboratory and for this sample to be sent to the Accelerator Laboratory in Cape Town for full radiation exposure tests. This test results are then to be discussed with the Duvha Occupational Health Practitioners, who will then advise the Power Station Management on the risk, if any, of the incident/exposure.
17) The Contractor takes full responsibility and accountability for all other people/staff/personnel/labour that he/she employs or utilises, whether in full-time/part-time/contract basis, in executing the works or other work whilst on the Employers premises.
18) The Contractor ensures that Safety Harnesses are used for all work carried out in elevated positions, as defined in the Occupational Health and Safety Act, No 85 of 1993 or any other Code of Practice or standard or the Construction Regulations.
19) All safety equipment or Machinery used complies with the SANS Codes of Quality and Practice or any Code as stipulated in the Occupational Health and Safety Act, No 85 of 1993, and any amendments thereto.
20) The Contractor at all times consider himself as “Employer” as defined in the Occupational Health and Safety Act, No 85 of 1993 and do not consider himself as under supervision or management of the Employer with regard to Health and Safety Requirements but only from a Commercial Contractual Condition of Contract. Under no circumstances does the Contractor consider himself a sub-ordinate or being given supervision.
21) The Contractor provides and maintains his own facilities as required in the Occupational Health and Safety Act, No 85 of 1993 or any other Code of Practice or standard or the Construction Regulations, if not agreed contractually or arranged by the Employer.
22) The Contractor has Safety Systems in place at his premises for the total contract period and these shall include the following:
    i. Safety Management Structure and Compliance to these
    ii. Statutory Appointments
    iii. Records and documentation of all Risk and Hazard Analyses.
    iv. Planned Job Observations Records and Documents.
    v. Employment history and records of all personnel, part-time or full-time or contract labour.

vi. Medical History of all personnel, part-time or full-time or contract labour
vii. Training and Competency Records with regard to Safety, Health and Environment.
viii. Training and Competency Records with regard to the skills he uses to carry out the works or any other works in the Employers premises.
ix. Compensation Commissioner Records and proof of registration.
x. Records and documentation with regard to any sub-contractor or labour-only contracts he places or uses to carry out the works or any other works in Employers premises.
xi. Personal Protective Equipment and Safety Equipment Inspection, training and competency records and documentation.
xii. Employment contracts for all sub-contractor or labour-only contracts.
xiii. Compliance to a Safety System, such as NOSA or any other system that is similar in nature.
xiv. Records of all incidents or accidents, and vehicle accidents, incurred during execution of this works or any other works in the Employers premises.
xv. Records of all man-hours, including sub-contractors or labour-only contracts, the Contractor spends on the Employers premises.
xvi. Written Safe Work Procedures for all hazardous tasks the Contractor executes on the Employers premises.
xvii. A Fall Protection Plan for all elevated work the Contractor does on the Employers premises.
xviii. Environmental plan and awareness training.
xix. Induction training records of his staff by himself/herself.
xx. Minimum wage compliance for the different skills and to which Bargaining Council compliance is made to and proof of membership, if any.
xxi. Risk Assessment of this type of works
xxii. Proof of authorisation/accreditation from Department of Labour and or other Statutory Body for this type of works, if applicable
xxiii. Emergency Evacuation and Rescue Plan for the hazardous tasks related to the works.

23) The contractor shall appoint a person, qualified and competent in accordance with the SHEQ requirements, as the liaison with the Eskom safety officer/delegated person for all matters related to health and safety, this person is contactable 24hours a day.
24) The contractor shall comply with the following:
i. Form 74 – SHE specification.
ii. Eskom Safety, Health, Environmental and Quality Policy: 32-727
iii. Eskom Life Saving Rules, Directive: 32-421
iv. Eskom Procedure on Smoking: 32-36
v. Eskom Incident Management Procedure 32-95 Rev 3
vi. Eskom Plant safety regulations 36-681.
vii. Eskom Integrated Risk management and Standards 32-391
viii. PGZ 45-24 HAZOP study guidelines
ix. Eskom Standard SAS0012 Safety, Health & Environmental Specifications For Contractors

The *Contractor* shall comply with the health and safety requirements contained in this Works Information.

3.6.4 Environmental constraints and management

(1) The Contractor shall comply with Eskom Environmental procedure waste management procedure 32-245

(2) The Contractor is responsible to keep the work area clean of any rubble.

(3) All waste introduced and/or produced on the Employer's premises by the Contractor for this contract, is handled in accordance with the minimum requirements for the Handling and Disposal of Hazardous Waste in terms of Government Legislation as proclaimed by the Department of Water Affairs and Forestry Act 1994 Ref: ISBN0621 - 16296-5.

(4) **The Employer will provide special colour coded bins for refuse disposal. The Employer will empty these bins.**

(5) The Contractor ensures that all workers under his control strictly adhere to the correct use of refuse bins:

Maroon bins: - Scrap metal only

White bins: - Lagging and general household rubbish

Yellow bins: - Ash, dust, coal dust and sand

(6) For the full duration of the Works, the Contractor is responsible to keep the work area clean of any rubble, and to place all refuse into the bins provided.

(7) Removal of scrap and waste, including concrete/ash/refractory material to a location within the Duvha Power Station security gates and/or the ash dams must be included in the Price Schedule or Bill of Quantities. This must be inclusive of labour and equipment i.e., forklifts spades, shovels, transport, An Environmental Control Office (ECO) must be appointed to ensure that mitigation, and any corrective measures are implemented and adhered to.

(8) Any work undertaken within the wetland must be completed within one month.

(9) Construction should be undertaken during the dry season.

(10) Disturbance footprint to be kept as small as possible (1 m beyond the perimeter of the terrace).

(11) The wetland outside of the disturbance footprint must be demarcated as no-go zones.

(12) No mixing or storing of concrete within the wetland or associated 50 m buffer.

(13) Soils excavated from the fence foundations, within the wetlands, which are not required to backfill the hole, must either be removed or placed in such a way so as to not impede the flow.

(14) Temporary site establishment and/or laydown areas to be located within existing disturbed footprints of the construction site and a minimum distance of 50 m from the wetland.

(15) The Contractor shall comply with the Duvha Power Station section 21 I & (i) water uses General Authorisation for section 21 I & 21 (I) water uses, in terms of the national water act (act 36 of 1998) final report and the National Water Act (GN 509 of 2016).

The *Contractor* shall comply with the environmental criteria and constraints stated in this Work Information

3.6.5 Quality assurance requirements

(1) All work is carried out under the supervision of an experienced supervisor.

(2) The Contractor complies with the Employer's Quality Requirements as specified in Eskom Generation Standard QM58.

(3) All quality control documentation (QCP) is submitted to the Project Manager within 7 days of Contract date.

3.6.6 Programming constraints

(1) The Contractor submits a programme within 1 week of the Contract Date.

(2) The program shall be in Microsoft Projects format or Primavera

(3) The programme indicates

i. The hour duration of each activity,

ii. The working calendar (number of work hours per day, days per week),

iii. The exact quantity of people per day

iv. All phases and interfaces

3.6.7 *Contractor*'s management, supervision and key people

(1) The contractor shall provide a site Supervisor or Project Manager to supervise, monitor, control and coordinate all activities during the execution of the works

(2) Contractor shall also provide the following staff:

i. Quality control supervisor

ii. Site Safety representatives

iii. Design and Testing Engineer

iv. Responsible Person (RP)

v. Boilermaker

3.6.8 *Invoicing* and payment

1) Within one week of receiving a payment certificate from the Service Manager in terms of core clause 51.1, the Contractor provides the Employer with a tax invoice showing the amount due for payment equal to that stated in the Service Manager's payment certificate.

2) The Contractor shall address the tax invoice to Project Manager and include on each invoice the following information:

i. Name and address of the *Contractor* and the *Service Manager*.

ii. The contract number and title.

iii. *Contractor's* VAT registration number.

iv. The *Employer's* VAT registration number 4740101508.

v. Description of service provided for each item invoiced based on the Price List.

vi. Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT.

3.6.9 *Insurance* provided by the *Employer*

1) Refer to the contract data.

3.6.10 Contract change management

1) The *Contractor* or the *Project Manager* formally notifies each other of any event which may lead to a change in agreed terms as per NEC 3.

3.6.11 Provision of bonds and guarantees

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

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

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

1) The Contractor may keep records of payment and assessments of compensation events if deemed necessary.

3.6.13 Training workshops and technology transfer

N/A

3.6.14 Project Execution Methodology

General Requirements

1) The Contractor is responsible for carrying out all activities and supplying everything to provide the works.
2) This includes clarification and co-ordination with process plant engineers, other equipment manufacturers/suppliers and the Project Manager.
3) All documentation submitted by the Contractor is in an adequate state of completeness.

3.6.15 Engineering and the *Contractor*'s design

In a case whereby the Contractor is task to develop a design solution, the below points will apply:

a) The Contractor develops the detail design for the execution of works.
b) Any item of the conceptual design that is not feasible is corrected in the Contractor's detail design.

c) The Contractor's design includes schedule detailing the plant location code, size, type and make of all instrumentation and equipment utilised.
d) Design is approved when the Project Manager certifies sectional completion of the design activity.
e) The Employer may use the Contractor's design for any purpose related to the Employer's operational activities.

3.6.16 *Employer*'s design

The design of the park home has been carried out by the Original Manufacture of the park homes. The buildings are supplied as one complete unit to the client. These building exist already however there is a need to modify the internal partitioning walls, install and re-arrange services inside the buildings as per the scope of work.

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

N/A

3.6.18 Procedure for submission and acceptance of Contractor's design

N/A

3.6.19 Other requirements of the *Contractor*'s design

Physical Characteristics

All documents supplied by the *Contractor* are subject to the *Project Manager's* acceptance. The language of all documentation is required to be in English. 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*. Drawing numbers are assigned by the *Employer* as drawings are developed.

The Contractor is required to submit the Vendor Document Submission Schedule (VDSS) as per agreed dates to the delegated Employer's Representative. The Employer pre-allocates document numbers on the VDSS and sends back to the Contractor through the delegated Employer's Representative. The VDSS is revisable, and changes must be discussed and agreed upon by all parties. The Contractor's VDSS indicates the format of documents to be submitted.

Document Submission

All project documents must be submitted to the delegated Employer's Representative with transmittal note according to Project / Plant Specific Technical Documents and Records Management Work Instruction (240-76992014). In order to portray a consistent image it is important that all documents used within the project follow the same standards of layout, style and formatting as described in the Work Instruction.

The Contractor is required to submit documents as electronic and hard copies and both copies must be delivered to the Employer's Representative with a transmittal note.

In addition, the Contractor adheres to the following standards:

Documentation Management Review and Handover Procedure for Gx Coal Projects (240-66920003).

Project / Plant Specific Technical Documents and Records Management Work Instruction (240-76992014)

Email Subject

The *Contractor* submits all documentation to the *Employer's* Representative in the following media:

- Electronic copies are submitted to Eskom Documentation Centre through generic email address (drmsharedservices@eskom.co.za). The email subject as a minimum has the following: ***(Station_Project Name_Discipline_Subject)***. Electronic copies that are too large for email are delivered on CD/DVD, large file transfer protocol and/or hard drives to the Project Documentation Centre. In a case where CD has been submitted, a notification email, with the transmittal note attached, is sent to the project generic email address. The Representative is copied on the email as well.
- Hard copies are submitted to the *Employer's* Representative accompanied by the Transmittal Note.

3.6.20 Drawings Format and Layout

1. The creation, issuing and control of all Engineering Drawings will be in accordance to the latest revision of 240-86973501 – Engineering drawing Standard.
2. Drawings issued will be a minimum of one hardcopy and an electronic copy.
3. Drawings issued may not be "Right Protected" or encrypted.

3.6.21 Quality Management

1. The *Contractor* submits a fully detailed Quality Control Plan (QCP) for acceptance within four weeks of the Contract Date.
2. The *Contractor* submits a schedule of unpriced orders to be placed and this is updated regularly.
3. The *Contractor* is responsible for defining the level of QA/QC (intervention Points) or inspection to be imposed on his *Subcontractors* and suppliers of material in the Quality Control Plans (QCPs). This level is based on the criticality of equipment and be submitted to the *Employer* for acceptance.
4. Documents submitted for review and acceptance by the *Project Manager* after contract award and prior to the commencement of work are as stated in the Quality Contract Requirement clause 7.2.
5. The *Contractor* submits on a monthly basis, the following QA returns:

- A register of Defects with those older than 30 days being flagged and an explanation attached
- Register of accepted Defects
- A register of Non-Conformance Report
- Monthly Project Quality Report
- Monthly updated Site and pre-site programmes
- Inspection dates

- Site Acceptance Tests
- Inspections completed / outstanding.

6. All quality control documentation is submitted to the *Project Manager* within 7 days of Contract date.

3.6.22 Use of *Contractor*'s design

1) The Contractor's design is considered property of the Employer.
2) The Contractor's design is made use of during future operation and expansion of the buildings.
4) Eskom Pr. Eng. (Civil & Structural) will be responsible for acceptance of the structural integrity of Duvha additional classrooms and offices.

3.6.23 Design of Equipment

N/A

Equipment required to be included in the *works*

The Contractor must submit a project Inspection and Test Plan for all equipment included in the scope. The Contractor must only use ISO 9001 accredited suppliers for the equipment used in this project. The ISO 9001 certification should be supplied with the delivery documentation. Failure to do so will result in rejection of the equipment by Eskom. The Contractor should specify which pieces of equipment are of a proprietary nature, where standard documentation and certificates of conformity are the only forms of certification. If any components are to be manufactured, the Contractor must ensure that the manufacturer is ISO 9001 certified. The Contractor must supply Inspection and Test Plans for each phase of the project and submit to Eskom for review and approval.

3.6.24 As-built drawings, operating manuals and maintenance schedules

(1) 'As Built' documentation is supplied by the *Contractor* to the *Project Manager* upon completions of works.
(2) Information and wording on drawings shall be in English.

The following drawings shall be submitted when a contract is awarded:

- High security fence and the weld mesh fence layouts and details
- Fence drainage details
- Gate details
- Any other relevant drawing

Service manuals shall be provided before delivery and shall contain all information and procedures necessary for maintenance personnel to carry out routine preventative maintenance.
Service manuals shall be in hardcover, loose-leaf form. Any modifications thereto shall be described in detail, as a supplement to the service manual.

The Supplier shall provide five copies, in English, of each of the installation and maintenance manuals.

(3) Hard copies and soft copies of As Built documentation is provided by the *Contractor* as part of the works
(4) Acceptance of the 'As Built' documentation is a pre-requisite for the completion of the works

(5) The documents are reviewed by the *Project Manager* for correctness and conformance to the accepted design.
(6) Soft copies must be in Microsoft Office 2010 format
(7) Drawings must be in Bentley MicroStation or similar CAD 2D format

3.6.25 DELIVERABLES/ SUBMISSIONS BY THE CONTRACTOR

N/A

Procurement

1 Procurement

The *Contractor* shall comply with Basic Condition of Employment Act and Labour Relation Act for the use of labour in executing the works to give effect to the right to fair labour practices referred to in section 23(1) of the Constitution by establishing and making provision for the regulation of basic condition of employment, and thereby to comply with the obligations of the Republic as a member state of the Internal Labour Organisation, and to provide matters connected therewith

1.1 People

1.1.1 Minimum requirements of people employed on the Site

People providing the works will have been declared competent in writing to carry out the works. They will abide by all the rules and regulations as set out by Duvha Power Station. They are prohibited from being or going to any other site other than the one where the work is being executed.

1.1.2 BBBEE and preferencing scheme

Eskom's policy is to maximise purchases from Black or Black Empowering Enterprises (BEE's) whether Black Woman-owned, small or Large Black or Black empowering suppliers. The purpose is to promote entrepreneurship in black communities and give black business access to the mainstream of business opportunity.

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

The *Contractor* complies with and fulfils the *Contractor's* obligations in respect of the Accelerated and Shared Growth Initiative - South Africa in accordance with and as provided for in the *Contractor*'s ASGI-SA Compliance Schedule IT 1.2 ASGI-SA requirements.

1.2 Plant and Materials

1.2.1 Quality

a) All work is carried out under the supervision of an experienced supervisor.

b) The *Contractor* complies with the *Employer*'s Quality Requirements as specified in Eskom Generation Standard GGS 0462. The Contractor, when using materials that are required to comply with a standard specification

c) Shall, if so ordered, furnish the Engineer with certificates showing that the materials do so comply.

d) Where so specified, materials shall bear the official mark of the appropriate standard.

e) Samples ordered or specified shall be delivered to the Engineer's office on site.

f) Unless otherwise specified, all proprietary materials shall be used and placed in strict accordance with the published instructions of the relevant manufacturer.

g) All quality control documentation is submitted to the *Project Manager* within 7 days of Contract date.

1.2.2 Plant & Materials provided "free issue" by the *Employer*

a) The Employer will provide power supply, water and land for the storage of equipment and material.
b) The *Contractor shall* supplies all the necessary equipment and material required to execute the *works*.

Should the *Contractor* require using of any of the *Employer's* Equipment, including compressed air, electricity, water supply and crane age, it must be specified in the Works Information supplied by the *Contractor.* The *Employer* does not guarantee continuity of supply of any of these items.

1.2.3 *Contractor*'s procurement of Plant and Materials

The Contractor shall make use SABS approved plant and material. Test certificates shall be given to the project manager.

1.2.4 Spares and consumables

N/A

1.3 Tests and inspections before delivery

N/A

1.4 Marking Plant and Materials outside the Working Areas

All plant and materials outside working areas are to be marked "for contractor" until such time that they are tested and installed at the site/plant.

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

Cranes will be required for lifting of building material, tools and other equipment.

2 Construction

2.1 Temporary works, Site services & construction constraints

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

a) The contractor applies for access permits for all works exceeding two (2) weeks via the Project Manager, who will co-ordinate this.
b) The *Contractor* applies for *Contractor's* Permits for all his employees and/or subcontractors at the Security gate, at least 24 hours prior to entry of the Duvha Power Station Security Area.
c) The *Contractor* completes the specific form in the Duvha Power Station Contractors Safety Manual, listing all the personnel that he intends using on site.
d) The completed list, identified with the *Contractor's* name, contains the following information:
    - Employee Name
    - Employee ID Number
    - Eskom Safety Co-ordinator signature
    - Eskom Project Manager Signature
    - Validity Date

e) No permits are issued to personnel who have not attended safety induction.

f) The *Contractor* photocopies the first page of the ID book of every one of his employees; reduced to the size 65%.

g) This completed list, together with the photocopies of the ID books is delivered to Protective Services for the preparation of the *Contractor's* Permits.

h) The *Contractor* allows at least 24 hours for the preparation of the security permits, before he collects the permits from the Protective Services offices.

i) The *Contractor's* personnel are required to be in possession of a *Contractor's* Permit at all times inside Duvha Power Station.

j) All *Contractors'* permits are submitted back to Protective Services when the workers leave the site after completion of the *works*. Failure returns the permits will result in a R25, 00 penalty for each non returned permit.

k) The *Contractor* compiles detailed Tool Lists (obtainable from Protective Services) of all tools and equipment to be taken on site before arriving at the power station.

l) Authorised copies of these lists are retained to be used again when the tools and equipment is removed from site.

m) The *Contractor's* visitors and all personnel conform to the security arrangements in force at Duvha Power Station.

n) Application forms for visitors are filled in by the *Contractor's* Site Manager and approved by the *Project Manager*, and submitted to the *Employer's* Protective Services office one day prior to the visit**.**

o) Visitors will not be allowed on site if the necessary forms are not in the possession of security staff.

p) The Chief Security Officer may, with valid cause, remove any of the *Contractor's* personnel from the site, either temporarily or permanently. He may deny access to the site to any person whom, in the opinion of the said Chief Security Officer, constitutes a security risk.

q) No unauthorised vehicles will be allowed on site. Only *Contractor's* vehicles with displayed Contract Vehicle Permits disks will be allowed on site. Contract Vehicle Applications are directed to the *Project Manager* for consideration and approval.

r) The *Contractor* is restricted to the Site. The *Contractor* is forbidden to enter any other areas, and ensures that his employees abide by these regulations.

s) Parking inside the power station is strictly forbidden, except for loading purposes.

t) No recruiting of casual labour may be done on Eskom premises, including the area outside the Power Station Security Gate.

u) Security personnel may search any premises, property or person within the security area of Duvha Power Station

v) No Photographic equipment will be allowed within the security area of the Power Station without obtaining permission.

w) Application forms for such permission is available from the Protective Services offices.

x) Any person found in possession of such equipment will be prosecuted in terms of the National Key Point Act.

y) The contractor technicians and artisan must have relevant qualifications and experience.

2.1.2 Restrictions to access on Site, roads, walkways and barricades

a) Pedestrian crossing are make on the road they should be used when crossing the road
b) Inside the plant walkways are clear makes they should be used when walking inside the plant to keep safe on any object that might fall.
c) Barricades are provided where there are open trenches and around the sumps and manholes.
d) The contractor shall occupy only such ground as is necessary to carry out the works.

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

a) The LAR is for the person in charge of the plant to maintain control over activities taking place on his plant that are not covered by the Plant Safety Regulation and Operating Regulations for High Voltage Systems.

b) Activities that are allowed to be carried out under the LAR must not require a permit and must satisfy the following criteria:

c) They must not involve danger to the person carrying out the activity;

d) No plant isolations must be required;

e) The activity must be performed by a skilled person and there must be no risk of a production loss;

f) The duration of the activity must be less than 24 hours

g) The *Supervisor* accompanies the *Contractor* during the first instances of working under a LAR on a specific plant area.

h) It is very important that the person who plans to do an activity on a plant under the LAR informs the person in charge of the plant (ASS on the panel or PPO at WTP) of what will be done.

i) This means verbally telling the person in charge of the plant what will be done and not just signing the LAR book. The LAR book is also signed.

j) It is also important that as soon as the activity is completed the person, who was doing the activity, notify (verbally) the person in charge of the plant that conditions are back to normal and that the LAR has been signed off. Just signing the LAR book is not sufficient.

k) For more information please refer to Plant Safety Regulation.

2.1.4 Health and safety facilities on Site

(a) The *Contractor* provides a First Aid service to his employees and sub-*Contractor*. In the case where these prove to be inadequate, like in the event of a serious injury, the *Employer*'s Medical Centre and facilities will be available.

(b) Outside the *Employer's* office hours, the *Employer*'s First Aid Services will only be available for serious injuries and life threatening situations. The *Employer* shall be entitled, however, to recover the costs incurred, in the use of the above *Employer*'s facilities, from the *Contractor*.

(c) The *Contractor* to ensure that qualified and competent First Aiders and Emergency Care staff is permanently on site and at actual construction site for emergency situations, as and when they arrive.

The *Contractor* or his staff shall not move the injured party from the incident position and site unless the person/s life is in danger or the person is moved by a qualified and trained Emergency Care Worker.

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

a) No fauna or flora will be collected or removed from any farm by any visitor without written permission of the landowner, in which case cognizance will be taken of appropriate provincial legislation pertaining to fauna and flora.

b) Under such cases Eskom Holding's ethical policies and guidelines will be strictly applied.

2.1.6 Cooperating with and obtaining acceptance of Others

a) The Contractor shall co-operate with others in obtaining and providing information which they need in connecting with the works.

b) The Contractor shall share the working area with others in executing the works.

The contractor cooperates with others in obtaining and providing information which they need in connection with the works.

2.1.7 Publicity and progress photographs

a) Should publicity and or progress photographs be required an application shall be made via the Project Manager.

2.1.8 *Contractor*'s Equipment

a) The Contractor's attention is drawn to the applicable regulation framed under the Machinery and Occupational Safety Act, 1983 (Act No. 6 OF 1983)
b) When working in built-in areas , the contractor shall provide and use suit able and effective silencing devices for pneumatic tools and other plant would otherwise cause a noise level exceeding 85 Db(A) during excavation and other works.
c) Alternatively the Contractor shall by means barriers, effectively isolate the source of any such noise in order to comply with the said regulation.

2.1.9 Equipment provided by the *Employer*

a) Should the *Contractor* require using of any of the *Employer's* Equipment, including compressed air, electricity, water supply and crane age, it must be specified in the Works Information supplied by the *Contractor.* The *Employer* does not guarantee continuity of supply of any of these items.
b) The *Employer* shall be entitled to withdraw use of the said Equipment, should proper maintenance and cleanliness not be ensured. In that event, the *Contractor* shall be obliged to provide the necessary Equipment at his own cost.
c) The *Contractor* is responsible for the repair, replacement or correction as necessary of all pieces of tools and equipment supplied by the *Employer* which are damaged and / or lost whilst in the *Contractor*'s custody and control.

2.1.10 Site services and facilities

a) Potable Water Supply

- Potable water is available at the existing points.

b) Electrical Power Supply

- Power is available at the existing points.

c) Toilet Facilities

- The *Employer* provides the *Contractor* access to existing toilet facilities.

d) Catering Facilities

- The *Contractor* are not allowed to use the *Employer's* dining facilities, unless a specific agreement has been made between the *Contractor* and Eskom Catering and Accommodation Services (ECAS).

- The *Contractor* may buy take away meals from the fast foods outlet on Site.

e) Medical Facilities

- The *Contractor* provides a First Aid service to his employees and subcontractors. In the case where these prove to be inadequate, like in the event of a serious injury, the *Employer's* Medical Centre and facilities will be available.

- Outside the *Employer's* office hours, the *Employer's* First Aid Services are only available for serious injuries and life threatening situations.
- The *Employer* recovers the costs incurred, in the use of the above *Employer's* facilities, from the *Contractor*

2.1.11 Facilities provided by the *Contractor*

The contractor should provide facilities they deem necessary in executing the work. This must be discussed with the Project Manager prior to commencement of work.
The *Contractor shall* supplies all the necessary equipment and material required to execute the *works*, including portable ablution facilities and proper eating facilities for their employees.

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

The Contractor will cooperate with others who might be working in adjacent premises.

2.1.13 Survey control and setting out of the *works*

Regular plant walks on safe work execution and production will be carried out by the Project Manager randomly.

2.1.14 Control of noise, dust, water and waste

Earplugs should be worn if excessive noise will be generated by machinery. Dust masks will be worn to prevent dust inhalation.

2.1.15 Giving notice of work to be covered up

Project Manager to be notified about any issues that poses a risk to the plant or employees before any specific task in relation to that risk is undertaken.

2.1.16 Hook ups to existing works

a) The Contractor must inform the project manager and the engineer if a need arise of hooking up on existing work.
b) The project engineer will then verify the safe use of any existing structure as a support.

2.2 Completion, testing, commissioning and correction of Defects

2.2.1 Work to be done by the Completion Date

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

	Item of work	**To be completed by**
	As built drawings of	Within days after Completion
	Performance testing of the *works* in use as specified in paragraph of this Works Information.	See performance testing requirements.

2.2.2 Use of the *works* before Completion has been certified

The Employer will take over the completed cells after commissioning without any defects.

2.2.3 Materials facilities and samples for tests and inspections

All signed test reports/results (concrete, layer works compaction, weld test) are to be submitted to the Project Manager within 3 days of the completion of the test.

2.2.4 Commissioning

- The Contractor shall conduct commissioning under the supervision of the Project Manager and Engineer.
- The Contractor shall carry out sufficient checks to satisfy himself that the material use and the workmanship comply consistently with the specified requirement.

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

2.2.6 Take over procedures.

Takeover will be on after the Completion Date. The *Contractor* shall have done everything required to provide the works and the Engineer has done all the necessary inspections and the approval of the works done.

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

The Project Manager issues the defects certificate at the later defect date and the end of the last defect correction period. The Employer's right in respect of the defect which the supervisor has not found and notified are not affected by the issue of the defect certificate.
The Contractor contacts the Project Manager to gain access to the site to correct defects.

2.2.8 Performance tests after Completion

Duvha Quality department together with the Project Manager, Engineer and Contractor will sign off the works as having met all the requirements as set out in the works information after completion.

2.2.9 Training and technology transfer

N/A

2.2.10 Operational maintenance after Completion

The contractor accepts full responsibility once he executes the works that the product will last for the minimum operational duration as stated in the data packs after project completion and commissioning.

3 Plant and Materials standards and workmanship

3.1 Dealt with in the scope of work Investigation, survey and Site clearance

Thorough site inspection will take place with Contractor, Project Manager and System Engineer in attendance prior to commencement of work on site.

3.2 Electrical & mechanical engineering works

All engineering works, electrical and mechanical will be carried out according to Plant Safety Regulations (Permit to Works System) and any other station specific rules and regulations.

7 List of drawings

7.1 Drawings issued by the *Employer*

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

Note: Some drawings may contain both Works Information and Site Information.

Drawing number	Revision	Title

Construction

3.3 Temporary works, Site services & construction constraints

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

y) The contractor applies for access permits for all works exceeding two (2) weeks via the Project Manager, who will co-ordinate this.

z) The *Contractor* applies for *Contractor's* Permits for all his employees and/or subcontractors at the Security gate, at least 24 hours prior to entry of the Duvha Power Station Security Area. .

aa) The *Contractor* completes the specific form in the Duvha Power Station Contractors Safety Manual, listing all of the personnel that he intends using on site.

bb) The completed list, identified with the *Contractor's* name, contains the following information:

- Employee Name
- Employee ID Number
- Eskom Safety Co-ordinator signature
- Eskom Project Manager Signature
- Validity Date

cc) No permits are issued to personnel who have not attended safety induction.

dd) The *Contractor* photocopies the first page of the ID book of every one of his employees; reduced to the size 65%.

ee) This completed list, together with the photocopies of the ID books is delivered to Protective Services for the preparation of the *Contractor's* Permits.

ff) The *Contractor* allows at least 24 hours for the preparation of the security permits, before he collects the permits from the Protective Services offices.

gg) The *Contractor's* personnel are required to be in possession of a *Contractor's* Permit at all times inside Duvha Power Station.

hh) All *Contractors'* permits are submitted back to Protective Services when the workers leave the site after completion of the *works*. Failure returns the permits will result in a R25, 00 penalty for each non returned permit.

ii) The *Contractor* compiles detailed Tool Lists (obtainable from Protective Services) of all tools and equipment to be taken on site before arriving at the power station.

jj) Authorised copies of these lists are retained to be used again when the tools and equipment is removed from site.

kk) The *Contractor's* visitors and all personnel conform to the security arrangements in force at Duvha Power Station.

ll) Application forms for visitors are filled in by the *Contractor's* Site Manager and approved by the *Project Manager*, and submitted to the *Employer's* Protective Services office one day prior to the visit**.**

mm) Visitors will not be allowed on site if the necessary forms are not in the possession of security staff.

nn) The Chief Security Officer may, with valid cause, remove any of the *Contractor's* personnel from the site, either temporarily or permanently. He may deny access to the site to any person whom, in the opinion of the said Chief Security Officer, constitutes a security risk.

oo) No unauthorised vehicles will be allowed on site. Only *Contractor's* vehicles with displayed Contract Vehicle Permits disks will be allowed on site. Contract Vehicle Applications are directed to the *Project Manager* for consideration and approval.

pp) The *Contractor* is restricted to the Site. The *Contractor* is forbidden to enter any other areas, and ensures that his employees abide by these regulations.

qq) Parking inside the power station is strictly forbidden, except for loading purposes.

rr) No recruiting of casual labour may be done on Eskom premises, including the area outside the Power Station Security Gate.

ss) Security personnel may search any premises, property or person within the security area of Duvha Power Station

tt) No Photographic equipment will be allowed within the security area of the Power Station without obtaining permission.

uu) Application forms for such permission is available from the Protective Services offices.

vv) Any person found in possession of such equipment will be prosecuted in terms of the National Key Point Act.

y) The contractor technicians and artisan must have relevant qualifications and experience.

3.3.2 Restrictions to access on Site, roads, walkways and barricades

e) Pedestrian crossing are make on the road they should be used when crossing the road
f) Inside the plant walkways are clear makes they should be used when walking inside the plant to keep safe on any object that might fall.
g) Barricades are provided where there are open trenches and around the sumps and manholes.
h) The contractor shall occupy only such ground as is necessary to carry out the works.

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

l) The LAR is for the person in charge of the plant to maintain control over activities taking place on his plant that are not covered by the Plant Safety Regulation and Operating Regulations for High Voltage Systems.

m) Activities that are allowed to be carried out under the LAR must not require a permit and must satisfy the following criteria:

n) They must not involve danger to the person carrying out the activity;

o) No plant isolations must be required;

p) The activity must be performed by a skilled person and there must be no risk of a production loss;

q) The duration of the activity must be less than 24 hours

r) The *Supervisor* accompanies the *Contractor* during the first instances of working under a LAR on a specific plant area.

s) It is very important that the person who plans to do an activity on a plant under the LAR informs the person in charge of the plant (ASS on the panel or PPO at WTP) of what will be done.

t) This means verbally telling the person in charge of the plant what will be done and not just signing the LAR book. The LAR book is also signed.

u) It is also important that as soon as the activity is completed the person, who was doing the activity, notify (verbally) the person in charge of the plant that conditions are back to normal and that the LAR has been signed off. Just signing the LAR book is not sufficient.

v) For more information please refer to Plant Safety Regulation.

3.3.4 Health and safety facilities on Site

(d) The *Contractor* provides a First Aid service to his employees and sub-*Contractor*. In the case where these prove to be inadequate, like in the event of a serious injury, the *Employer*'s Medical Centre and facilities will be available.

(e) Outside the *Employer's* office hours, the *Employer*'s First Aid Services will only be available for serious injuries and life threatening situations. The *Employer* shall be entitled, however, to recover the costs incurred, in the use of the above *Employer*'s facilities, from the *Contractor*.

(f) The *Contractor* to ensure that qualified and competent First Aiders and Emergency Care staff is permanently on site and at actual construction site for emergency situations, as and when they arrive.

The *Contractor* or his staff shall not move the injured party from the incident position and site unless the person/s life is in danger or the person is moved by a qualified and trained Emergency Care Worker.

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

c) No fauna or flora will be collected or removed from any farm by any visitor without written permission of the landowner, in which case cognizance will be taken of appropriate provincial legislation pertaining to fauna and flora.
d) Under such cases Eskom Holding's ethical policies and guidelines will be strictly applied.

3.3.6 Cooperating with and obtaining acceptance of Others

c) The Contractor shall co-operate with others in obtaining and providing information which they need in connecting with the works.
d) The Contractor shall share the working area with others in executing the works.

The contractor cooperates with others in obtaining and providing information which they need in connection with the works.

3.3.7 Publicity and progress photographs

b) Should publicity and or progress photographs be required an application shall be made via the Project Manager.

3.3.8 *Contractor*'s Equipment

d) The Contractor's attention is drawn to the applicable regulation framed under the Machinery and Occupational Safety Act, 1983 (Act No. 6 OF 1983)
e) When working in built-in areas , the contractor shall provide and use suit able and effective silencing devices for pneumatic tools and other plant would otherwise cause a noise level exceeding 85 Db(A) during excavation and other works.
f) Alternatively the Contractor shall by means barriers, effectively isolate the source of any such noise in order to comply with the said regulation.

3.3.9 Equipment provided by the *Employer*

d) Should the *Contractor* require using of any of the *Employer's* Equipment, including compressed air, electricity, water supply and crane age, it must be specified in the Works Information supplied by the *Contractor.* The *Employer* does not guarantee continuity of supply of any of these items.
e) The *Employer* shall be entitled to withdraw use of the said Equipment, should proper maintenance and cleanliness not be ensured. In that event, the *Contractor* shall be obliged to provide the necessary Equipment at his own cost.
f) The *Contractor* is responsible for the repair, replacement or correction as necessary of all pieces of tools and equipment supplied by the *Employer* which are damaged and / or lost whilst in the *Contractor*'s custody and control.

3.3.10 Site services and facilities

f) Potable Water Supply

- Potable water is available at the existing points.

g) Electrical Power Supply

- Power is available at the existing points.

h) Toilet Facilities

- The *Employer* provides the *Contractor* access to existing toilet facilities.

i) Catering Facilities

- The *Contractor* are not allowed to use the *Employer's* dining facilities, unless a specific agreement has been made between the *Contractor* and Eskom Catering and Accommodation Services (ECAS).
- The *Contractor* may buy take away meals from the fast foods outlet on Site.

j) Medical Facilities

- The *Contractor* provides a First Aid service to his employees and subcontractors. In the case where these prove to be inadequate, like in the event of a serious injury, the *Employer's* Medical Centre and facilities will be available.
- Outside the *Employer's* office hours, the *Employer's* First Aid Services are only available for serious injuries and life threatening situations.
- The *Employer* recovers the costs incurred, in the use of the above *Employer's* facilities, from the *Contractor*

3.3.11 Facilities provided by the *Contractor*

The contractor should provide facilities they deem necessary in executing the work. This must be discussed with the Project Manager prior to commencement of work.
The *Contractor shall* supplies all the necessary equipment and material required to execute the *works*, including portable ablution facilities and proper eating facilities for their employees.

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

The Contractor will cooperate with others who might be working in adjacent premises.

3.3.13 Survey control and setting out of the *works*

Regular plant walks on safe work execution and production will be carried out by the Project Manager randomly.

3.3.14 Control of noise, dust, water and waste

Earplugs should be worn if excessive noise will be generated by machinery. Dust masks will be worn to prevent dust inhalation.

3.3.15 Giving notice of work to be covered up

Project Manager to be notified about any issues that poses a risk to the plant or employees before any specific task in relation to that risk is undertaken.

3.3.16 Hook ups to existing works

c) The Contractor must inform the project manager and the engineer if a need arise of hooking up on existing work.
d) The project engineer will then verify the safe use of any existing structure as a support.

3.4 Completion, testing, commissioning and correction of Defects

3.4.1 Work to be done by the Completion Date

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

	Item of work	**To be completed by**
	As built drawings of	Within days after Completion
	Performance testing of the *works* in use as specified in paragraph of this Works Information.	See performance testing requirements.

3.4.2 Use of the *works* before Completion has been certified

The Employer will take over the completed cells after commissioning without any defects.

3.4.3 Materials facilities and samples for tests and inspections

All signed test reports/results (concrete, layer works compaction, weld test) are to be submitted to the Project Manager within 3 days of the completion of the test.

3.4.4 Commissioning

- The Contractor shall conduct commissioning under the supervision of the Project Manager and Engineer.
- The Contractor shall carry out sufficient checks to satisfy himself that the material use and the workmanship comply consistently with the specified requirement.

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

3.4.6 Take over procedures.

Takeover will be on after the Completion Date. The *Contractor* shall have done everything required to provide the works and the Engineer has done all the necessary inspections and the approval of the works done.

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

The Project Manager issues the defects certificate at the later defect date and the end of the last defect correction period. The Employer's right in respect of the defect which the supervisor has not found and notified are not affected by the issue of the defect certificate.
The Contractor contacts the Project Manager to gain access to the site to correct defects.

3.4.8 Performance tests after Completion

Duvha Quality department together with the Project Manager, Engineer and Contractor will sign off the works as having met all the requirements as set out in the works information after completion.

3.4.9 Training and technology transfer

N/A

3.4.10 Operational maintenance after Completion

The contractor accepts full responsibility once he executes the works that the product will last for the minimum operational duration as stated in the data packs after project completion and commissioning.

Plant and Materials standards and workmanship

3.5 Dealt with in the scope of work Investigation, survey and Site clearance

Thorough site inspection will take place with Contractor, Project Manager and System Engineer in attendance prior to commencement of work on site.

3.6 Electrical & mechanical engineering works

All engineering works, electrical and mechanical will be carried out according to Plant Safety Regulations (Permit to Works System) and any other station specific rules and regulations.

7 List of drawings

7.1 Drawings issued by the *Employer*

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

Note: Some drawings may contain both Works Information and Site Information.

Drawing number	Revision	Title

Appendices

Appendix 1

Aux Maintenance Offices proposal.pdf

Appendix 2

Transport Park home Layout.pdf

Appendix 3

Training Department 23.pdf

Appendix 4

382-170110 - Duvha Additional Offices anc

Supporting documents

Supporting documents\Manage E

Supporting documents\Eskom's (

Supporting documents\ENVP000

Supporting documents\240-8697

Supporting documents\240-7016

Supporting documents\240-5636

Supporting documents\240-5622

Supporting documents\240-5571

Supporting documents\240-5311

Supporting documents\240-5311

Supporting documents\240-1079

Supporting documents\240-1025

C3.2 *CONTRACTOR*'S WORKS INFORMATION

N/A

PART 4: SITE INFORMATION

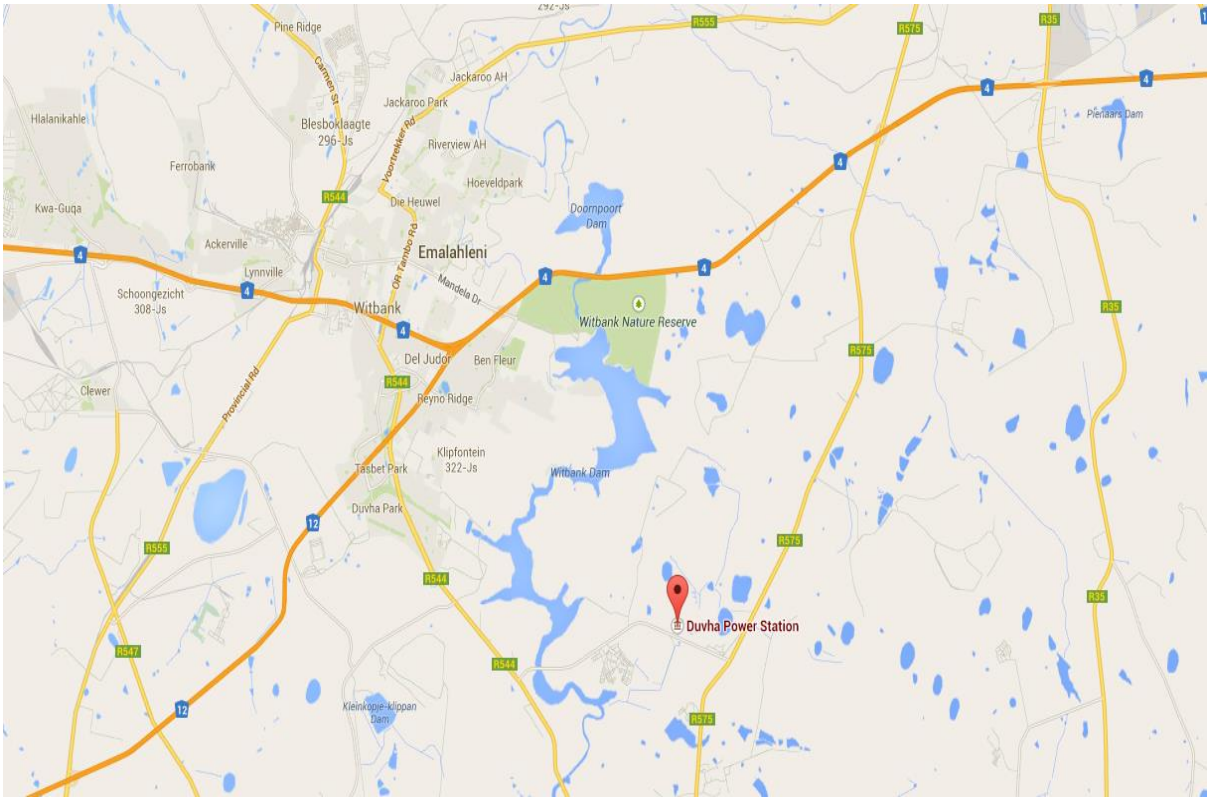
Document reference	Title	No of pages
	This cover page	1
C4	Site Information	
	Total number of pages	

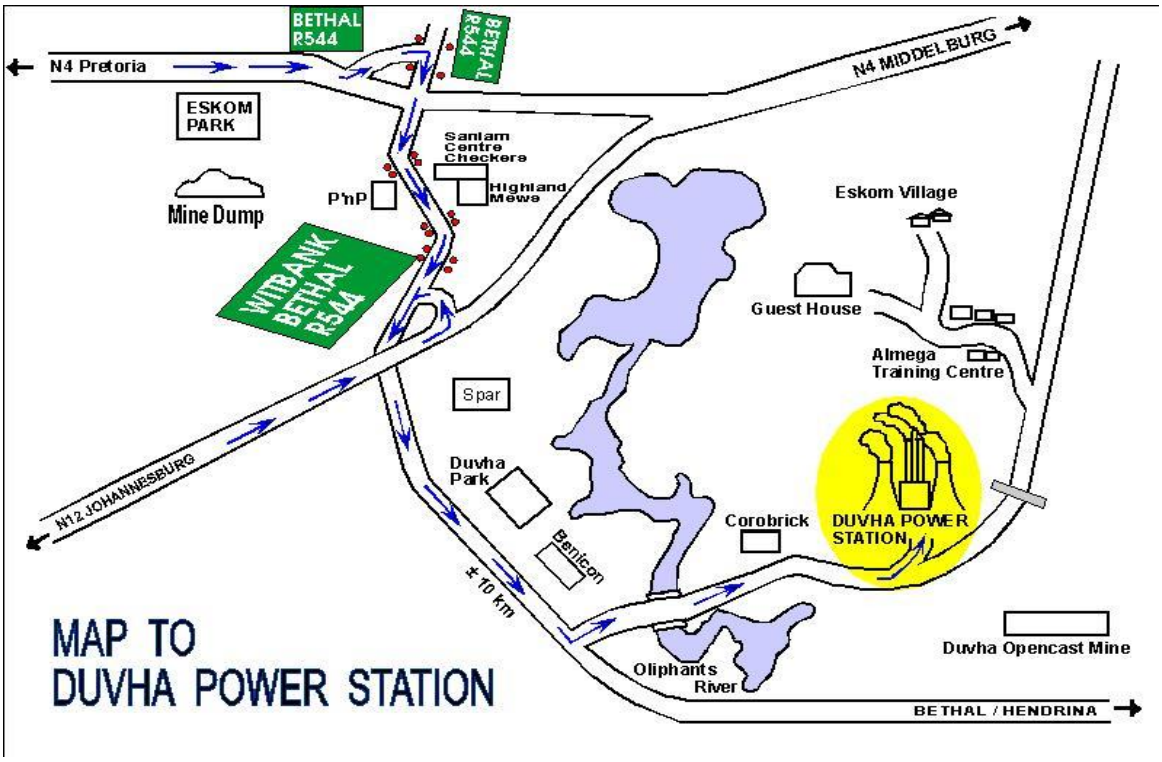
PART 4: SITE INFORMATION

Core clause 11.2(16) states:

1. Site Location

Duvha Power Station is located approximately 15km from Emalahleni, Mpumalanga Province and at an elevation of 1 600m above sea level. The location and access roads are shown in the diagrams below.





2. Maintenance and Housekeeping

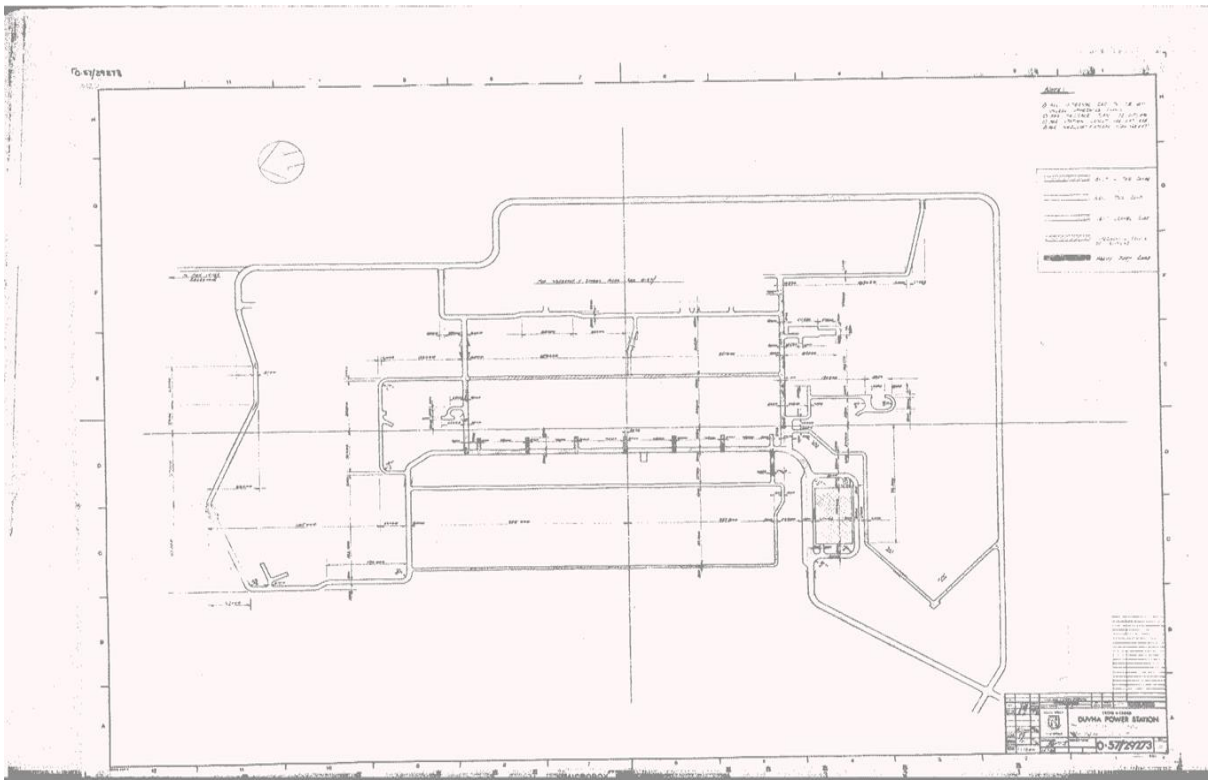
Maintenance of and within the Laydown Area and housekeeping of the Laydown and Working Areas will be the sole responsibility of the Contractor. All waste will be managed in accordance with Eskom Waste Management Procedure 32-245

3. Roads

The Contractor is provided with the Station Roads Layout (0.57/ 29273) which indicates the position of roads, width and turning radii, in order to plan access and movement of vehicles to Duvha Power Station. The Contractor's proposed route is issued to the Employer for review and acceptance. The Contractor is also issued certain available long sections and cross sections of the access roads.

The Contractor identifies the type of vehicles (incl. loading capacity), number of vehicles, and frequency of vehicles required in order to complete the works. The Contractor takes note that all existing available roads drawings are provided for information only. The Contractor is responsible for verifying the information provided before use.

- *Drawings provided for information only:*
- *0.57/ 29273 - Duvha Power Station, Station Roads Layout*



General description

PART 4: SITE INFORMATION

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

4. Services

a) Air

The Contractor is responsible for the supply of compressed air as is necessary for the execution and completion of the Works and remedy of defects.

b) Water

The *Employer* is to supply free issue potable water for domestic use, at a designated supply point. For uses other than domestic, the Contractor is responsible for the supply of water. Supply is based on reasonable use. The Supply point information is as per the Laydown and Working Areas Schedule.

Contractor is responsible for connection to the designated supply point and routing to desired areas within Laydown and Working areas.

c) Electrical Power Supply

Power is available at the existing points as provided by the *Employer*.

The Contractor provides his own portable 380V electrical distribution boards, and supply cables to and from the boards, for all his power supply requirements to execute the works.

Contractor's Electrical Distribution Boards complies with OHSA as referred to in the Electrical Installation Regulations and the Electrical Machinery Regulations.
Each board brought onto site must have a Certificate of Compliance issued by an accredited person.

The Contractors electrical distribution boards are installed at the works on a time negotiated with the Project Manager, prior to the access to the working site.
The Employer connects distribution boards to a 380V three-phase AC power supply, only after the Contractor has submitted the valid Certificate of Compliance.
All Contractors' Electrical Distribution Boards are earthed to the steel structure of the plant.

d) Sewage

The Contractor is responsible for either connecting to the local Sewage system or providing other means of managing sewage as required. The Contractor is responsible for connection to the designated supply points.

e) Gas

The Contractor is responsible for supply of any Gas as is necessary for the execution and completion of the Works and remedy of defects.

f) Communications

The Contractor will be responsible to provide for all communications services, including but not limited to internet, telephone, radio, required for the execution and completion of the Works and the remedy of Defects.

g) Overhead lines

The *Contractor* is responsible for ensuring any activities on Site do not interfere, impede or in any way disrupt any overhead lines, pylons or other transmission and distribution equipment. This is including but not limited to the transportation of Contractor's Equipment, Materials, Plant and Temporary Works to and from the Laydown and Working Areas.

The Contractor will be notified by the Employer for any services interruptions longer than 24 hours.

Planned interruptions may include strikes, maintenance and repairs activities etc.

5. Roads, facilities and Security

7.1 Access Road

The Contractor will be deemed to have been satisfied as to the suitability and availability of access routes to the Site (and other places, if any, as may be specified under the Contract as forming part of the Site).

7.2 Access to Site

Access to Site and continued use of the Site will be is in accordance with Duvha Access Control Procedure SCP0004 and the National Key Points Act, 1980 (Act No. 102 of 1980). The following must also be noted:

a) The *Contractor* applies for access permits for all works via the Employer's Representative.
b) The Contractor applies for Contractor's Permits for all his employees and/or subContractors at the Security gate, at least 72 hours prior to entry of the Duvha Power Station Security Area.
c) The Contractor submits his/her company's employee list to the Employers Safety Department listing all of the personnel that he intends using on Site when booking for SHE Induction as soon as the Contractor SHE File has been assessed and approved. At least 48 hours prior notice must be given to the Employer's Representative of the requirement to attend Site SHE inductions.
d) The completed list, identified with the Contractor's name, contains the following information:
    - Employee Name
    - Employee ID Number
    - Eskom Safety Co-ordinator signature
    - Employer's Representative's signature
    - Validity Date

a) No access permits are issued to personnel who have not attended SHE induction. A copy of proof of SHE induction attendance must be presented at Security when applying for employee access permits.
b) The Contractor photocopies the first page of the ID book of every one of his employees.
c) This completed list, together with the photocopies of the ID books / valid Passport / Work Permit is delivered to Protective Services for the preparation of the Contractor's Permits.
d) The Contractor allows at least 48 hours for the preparation of the security permits, before he collects the permits from the Protective Services offices.
e) The Contractor's personnel are required to be in possession of a Contractor's Permit at all times inside Duvha Power Station.
f) All Contractor permits are submitted back to Protective Services when the workers leave the site after completion of the works. The Contractor will ensure that all its employees/workers return such permits to the Employer. Failure to return the permits will result in a R100, 00 penalties for each non returned permit which will be deducted from the final payment.
g) The Contractor compiles detailed Tool Lists (obtainable from Protective Services) of all tools and equipment to be taken on site before arriving at the power station.
h) Authorised copies of these lists are retained to be used again when the tools and equipment is removed from site.
i) The Contractor's visitors and all personnel conform to the security arrangements in force at Duvha Power Station.
j) Application forms for visitors are filled in by the Contractor's Representative and approved by the Employer, and submitted to the Employer's Protective Services office one day prior to the visit.
k) Visitors will not be allowed on site if the necessary forms are not in the possession of security staff.
l) The Employer's Security Manager may, with valid cause, remove any of the Contractor's personnel from the site, either temporarily or permanently. They may deny access to the site to any person whom, in the opinion of the said manager constitutes a security risk.
m) No unauthorised vehicles will be allowed on site. Only Contractor vehicles with displayed Contract Vehicle Permits disks will be allowed on site. Contract Vehicle Applications are directed to the Employer's Representative for consideration and approval.
n) The Contractor is restricted to the Site. The Contractor is forbidden to enter any other areas, and ensures that his employees abide by these regulations.
o) No recruiting of casual labour may be done on Eskom premises, including the area outside the Power Station Security Gate.

p) Security personnel may search any premises, property or person within the security area of Duvha Power Station
q) No photographic equipment will be allowed within the security area of the Power Station without obtaining permission. Application forms for such permission is available from the Security Services offices at the main entrance. Any person found in possession of such equipment will be prosecuted in terms of the National Key Point Act.

7.3 Security of Working Areas

The Contractor is responsible for the security and safe keeping of all Working areas and any associated Contractor's Equipment, Materials, Plant, Temporary Works and Employer's Equipment as may be located within those areas.
The Contractor will at all times comply with the National Key Points Act, 1980 (Act No. 102 of 1980) within the parameters of the power station. The Contractor's proposal for achieving this will be submitted to the Employer for review within 14 days of the starting Date and the Employer will respond within 14 days of receipt.

The National Keys Point requirements will not be applicable to areas that fall outside the boundaries of the Duvha Power Station fence parameter. The Contractor will be responsible for security and access control for the Working areas. The access control must be a biometric type with capability to store all information, data retrievable, must be accessible and be able to indicate who is at the Working areas at any point in time.

The Contractor will be responsible for keeping unauthorised persons out of the Working Areas. Authorised persons will be limited to the Contractor's personnel, the Employer's personnel, Others and any other personnel notified to the Contractor by (or on behalf of the Employer), as authorised personnel. In addition, the Contractor will fully acquaint himself and strictly comply with all the Employer's security regulations particularly with regard to personnel, Plant, Material and the Contractor's Equipment entering or leaving the Site.

7.4 Welfare Facilities

The Contractor is responsible for provision, accessibility, maintenance, disposal of waste within, and housekeeping of all welfare facilities within the Working Areas, which include but are not limited to ablution, eating, changing, shower and rest areas. As a minimum the following will be provided:

- Shower facilities;
- Sanitary facilities;
- Changing facilities;
- Eating areas;

The Contractor is responsible for the provision and maintenance of the ablution facilities provided for his employees on the Working and Laydown areas. Additional sufficient temporary ablution facilities need to be put up by the Contractor on working area at various levels. These must be serviced and maintained as per health standard pertaining to the health and safety of these facilities.

The Contractor will provide sheltered eating areas for use of all Contractors' personnel on Site.

Eating areas will provide adequate shelter and will be ventilated and lighted. Tables and backed seating will be provided. Suitable receptacles with lids for depositing waste will be provided at convenient points inside and outside the eating areas.

The Contractor will ensure compliance to all legislation Eskom's Food Hygiene and Safety Management - 39-113 procedure with respect to food management. Compliance will be verified during the client's audits and inspections on the Contractor.

Welfare, Ablution and Dinning facilities provided by the Contractor must be approved and be acceptable to the Employer.

The Contractor is responsible for provision of suitable Ablution facilities within the Working areas, which as a minimum will meet all relevant legislation. These facilities are to be provided in sufficient quantities and within sufficient proximity to the Works so as not to impede the Works or the operations of the Duvha Power Station.The Contractor shall provide his own permanent and temporal Ablution facilities. The permanent toilets shall be erected and fully functionally by the access to site date.

The Contractor is responsible for the provision of all meals for employees, in line with all relevant legislation and standards. The Contractor is responsible for the provision of suitable eating areas and these facilities are to be provided in sufficient quantities and within sufficient proximity to the Works so as not to impede the Works or the operations of the Duvha Power Station.

The Contractor is not allowed to use the Employer's dining facilities, unless a specific agreement has been made between the Contractor and Eskom Catering and Accommodation Services (ECAS). The Contractor may buy take away meals from the fast foods outlet on Site.

7.5 People and Equipment Movement

a) Passenger or Goods Lift

The Employer will not provide any passenger or goods lift services.

b) Meetings

All meetings are to be recorded using minutes or a register, prepared and circulated by the person convening the meeting. Such minutes or register are not used for the purpose of confirming actions, instructions or determinations under the Contract as these are done separately by the person(s) identified in the conditions of contract to carry out such actions, instructions or determinations. All meetings will be as per the Employer's specified Project Control specification.

c) Permits

The Contractor will comply with the Generation Plant Safety Regulations 36-681 at all times. The Contractor will provide an acceptable number of authorised Responsible Persons in accordance with the Generation Plant Safety Regulations to ensure that no delays occur during the execution of the Works and removing of defects. Duvha Power Station Training will be the responsibility of the Contractor. Verification, examination and authorisation of the

nominated persons will be the responsibility of the Employer and will be performed on dates nominated by the Employer. Should the Contractors nominated persons fail to achieve the required standards, any further training, verification, examination and approval will be the responsibility of the Contractor. The Contractor is to provide the proposed number of people to be authorised as a tender returnable.

6. Construction Rules

8.1 Works Stoppages

The *Contractor* will conduct a safety work stoppage for every LTI and fatality. Work Stoppages may include critical and high risk activities, suspension of work or part of the works by Eskom inspectorate Team or Department of labour inspectors. Suspension or withdrawal may be as a result of closure of Site/working area due to an accident/incident and non-compliance to procedure, legislative change and requirements. Activities may commence if the area is declared and certified safe for people to work. The Contractor shall have at least one work stoppage per quarter (every three months) for incident lessoned learn, risk analyses, review and incident reviews.

8.2 Critical activities

All rigging method statements, lift plans and other relevant documents will be reviewed by the Employer, prior to the relevant activity commencing. The review period for method statements is 14 days as provided on the Contract Data and if the Employer gives notice to the Contractor that a method statement fails to comply with the Contract, as per General Conditions Clause 5.2, it will be rectified and resubmitted within 7 days of notification. Compliance to the use of PPE, parking on designated areas, adherence to smoking policy, and trespassing, entry and exist to restricted areas will be monitored by the Contractor.

8.3 Electronic devise usage

Cell phone usage will be in accordance with Eskom procedure 36-583. No cellphone or any other electronic devices will be used whilst conducting critical work, and high risks activities unless otherwise authorized by the Employer. Such communication devise exclude two-way radios and devises used for the works.

8.4 Respecting the Working areas

In order to provide a safe working environment and to respect all persons on the Site, the following are strictly forbidden:

- Spitting
- Urination (other than in designated toilets)
- Defecation (other than in designated toilets)
- Sexual Activities

The Employer will be entitled to immediately remove, or instruct the Contractor to immediately remove, any person for whom the Contractor is responsible for who is in violation of the above, in accordance with applicable contract conditions and/or other rules and regulations.

7. Environmental

9.1 Environmental Policy

The Contractor will implement, and provide a copy of, an Environmental Policy which complies with Environmental Management System ISO 14001 requirements. A copy of the applicable policy will be provided as a tender returnable.

9.2 Method Statements

No activity will commence before Method statement is approved by the Employer. The Method Statement will be submitted for acceptance by the Employer. All Method Statements will include, but not be limited to include, the following environmental information:

Detailed scope of work

- List of equipment to be used
- List of chemicals to be used with complete MSDS's
- Risk Assessment of the Environmental Risks associated with the activities
- Management Plan of the identified significant risks
- Waste Management Plan
- Oil Spill Management Plan
- Incident reporting and management
- Layout plan approved by the Supervisor.
- Storm water management and erosion control plan

9.3 Environmental Management Programme

This Environmental Management Programme (EMPr) is prepared as part of the requirements of the 2010 Environmental Impact Assessment Regulations promulgated under the National Environmental Management Act (NEMA, Act 107 OF 1998) as amended 2010.

The purpose of this Construction EMPr is to provide an easily interpreted reference document that ensures that the project environmental commitments, safeguards and mitigation measures from the environmental planning documents, project approvals, and Scope of Works are implemented.

The objectives for the EMPr are:

a) To develop, implement and maintain effective management systems for the environmental aspects of the maintenance works;

b) To monitor effectiveness of controls aimed at preventing impacts associated with aspects

c) To ensure compliance with relevant legislation (National, Provincial and Local), regulatory requirements and environmental documents;

d) To maximise the value and outcomes of environmental monitoring activities so that the information can be applied to the planning and implementation of future projects;

e) To ensure that all Environmental Management considerations are implemented during the Construction only

The EMPr follows an approach of identifying an over-arching aim and objectives accompanied by management actions that are aimed at achieving these objectives. The EMPr is divided into five (5) phases of the project cycle:

- Planning and Design Phase;
- Construction and Site Preparation;
- Rehabilitation Phase;
- Operational Phase; and
- Project Closure.

Contractor to adhere with Project Environmental Management Plan (EMP), site information and other legislative requirements

9.4 Refuse Disposal

Waste disposal must be as per the ENV 0005

The Employer will provide special colour coded bins for refuse disposal. The Employer will be responsible for emptying these bins. The Contractor will ensure that all his personnel and SubContractors strictly adhere to the correct use of refuse bins, coloured coded as follows:

- Maroon bins:- Scrap metal only
- White bins: - Lagging and general household rubbish
- Yellow bins:- Ash, dust, coal dust and sand

For the entire duration of the Works, the Contractor is responsible for keep the Working Areas clean of any rubble, and to place all refuse into the bins provided.

8. Other reports and publicly available information

10.1 Weather Data

10.1.1 Geotechnical Data

Contractor is responsible for any Geotech required. The following geotechnical reports are provided as Appendices to this document:
Electricity Supply Commission- Report on the Additional Drilling for Proposed Remedial Works at the Main Station Building, Duvha Power Station November 1979, Parts 1 to 4
This is provided for information purposes only and the Contractor must verify before use.

a) General Weather Conditions

The climate of the site is typical of Highveld conditions, with high summer temperatures and moderate to cold winters. Temperature statistics for the climatically similar to Bethal was obtained from the South African Weather Service website (www.weathersa.co.za). The Contractor will consider whether condition within all working site including areas where procurement outside the working site is considered. Measuring device is available at Duvha and to be agreed upon by both parties.

Climatic conditions will be defined as exceptionally adverse only when the measured condition deviates from the supplied average data by a margin of 30%, over the time period as stated within the average data (e.g. daily or monthly)

b) Temperature

During the summer months (October to March) average daily maximum temperatures are between 24°C and 35°C and average daily minimum temperatures are between 0°C and 14°C.

In the winter months (April to September) average daily maximum temperatures vary between 17°C and 23°C and average daily minimum temperatures are between 1°C and 9°C.

c) Snow and mist

Frost occurs frequently during the winter and spring months. Temperature statistics for the climatically similar to Bethal was obtained from the South African Weather Service website (www.weathersa.co.za).

The number of days with mist (no visibility) measuring in excess of a predetermined number of days, the Employer will make a proposal during contract negotiations

All records will be kept.

d) Rainfall

The area experiences thunderstorms during the summer months, which usually occur in the late afternoons. The annual average precipitation (millimetres) is show below. Weather Data for 2011-2014 to be provided as an addendum

Month	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Jan	176	207	77.5	296	223.5	173	-	-	-	-	65
Feb	59	102	17	17	63.5	53	-	-	-	-	21.8
March	54	46	26	121	55	40	-	-	-	-	30.6
April	53	42	6	0	0	126	-	-	-	-	29.4
May	0	4.5	0	44	14	83	-	-	-	-	0
June	0	0	30	0	17	0	-	-	-	-	0.8
July	0	0	0	0	0	0	-	-	-	-	1
Aug	2	40	0	0	30.5	0	-	-	-	-	0.4
Sept	0	0	0	0	8	0	-	-	-	-	46.2
Oct	35.5	17.5	163	47	82.5	46.5	-	-	-	-	34.2
Nov	142	80	179	138.6	153	59.5	-	-	-	-	54.2
Dec	65	148.5	127.3	174	148	237	-	-	-	-	135.2
							-	-	-	-	
Total	**586.5**	**687.5**	**625.8**	**837.6**	**795**	**818**	-	-	-	-	**418.8**

e) Wind

The area is subject to winds predominantly from the north and northwest, with greatest frequency during the months of August to December. During the remainder of the year, the wind remains

generally in a north/north westerly direction, but with a lesser frequency. Critical activities, carnage and working at height will be as per legislative requirements, equipment and

Safety Risk Management

1) The Contractor complies with the requirements of the Duvha Power Station Safety, Health & Environmental Specifications SAS 0012 rev 8.
2) **The documents are completed by the Contractor and submitted to the Employer before taking possession of the works**.
3) These documents are valid for the duration of the works.
4) The Contractor and all his personnel attend a Health and Safety Induction Course prior to starting with the works.
5) The induction course is presented by the Safety Risk Department at Duvha Power Station.
6) The Contractor makes arrangements with Project manager who will arrange with Safety Risk Management, for a slot and the date scheduled for the course.
7) The Contractor submits all the documents as indicated in the Safety, Health & Environmental Specifications relevant to the work to Safety Risk Management before the induction course.
8) The Contractor completes all appointments required and ensures that the appointee and appointees fully understand their responsibilities and are competent and trained to execute their duties.
9) The appointees/appointee ensures that all duties are carried out and records are kept by the Contractor for review/audit by the Employer or Inspector of Machinery.
10) Duvha Safety Risk Management has the right and authority to visit and inspect the Contractor's work place or Site establishment.
11) The Contractor supplies and ensures that his employees wear the necessary PPE according the risk assessments performed on the specific tasks to be carried out.
12) The Contractor ensures that everyone entering Duvha Power Station under his supervision are medically, physically and psychologically fit to enter Duvha Power Station.
13) The medical examination, at the Contractors cost, is carried out by a Registered Professional Occupational Health Practitioner and the examination shall include the following tests:
    a. Eye Test, Blood Pressure,
    b. Heart Function,
    c. Hearing Test and
    d. Lung Function.

14) A thorough examination is done and previous physical injuries, as well as occupational diseases/complications are covered.

15) If at any point in time during the execution of the works, the Contractor has a radiation-related incident/exposure, the onus is on the Contractor to immediately notify the Employer, the Medical Station, the Risk Manager and the Safety Risk Management Department.

16) The onus thereafter is for the Contractor to immediately arrange, at his/her cost, for blood samples to be taken by a Registered Laboratory and for this sample to be sent to the Excellerator Laboratory in Cape Town for full radiation exposure tests. This test results are then to be discussed with the Duvha Occupational Health Practitioners, who will then advise the Power Station Management on the risk, if any, of the incident/exposure.

17) The Contractor takes full responsibility and accountability for all other people/staff/personnel/labour that he/she employs or utilises, whether in full-time/part-time/contract basis, in executing the works or other work whilst on the Employers premises.

18) The Contractor ensures that Safety Harnesses are used for all work carried out in elevated positions, as defined in the Occupational Health and Safety Act, No 85 of 1993 or any other Code of Practice or standard or the Construction Regulations.

19) All safety equipment or Machinery used complies with the SANS Codes of Quality and Practice or any Code as stipulated in the Occupational Health and Safety Act, No 85 of 1993, and any amendments thereto.

20) The Contractor at all times consider himself as “Employer” as defined in the Occupational Health and Safety Act, No 85 of 1993 and do not consider himself as under supervision or management of the Employer with regard to Health and Safety Requirements but only from a Commercial Contractual

Condition of Contract. Under no circumstances does the Contractor consider himself a sub-ordinate

or being given supervision.

21) The Contractor provides and maintains his own facilities as required in the Occupational Health and

Safety Act, No 85 of 1993 or any other Code of Practice or standard or the Construction Regulations,

if not agreed contractually or arranged by the Employer.

22) The Contractor has Safety Systems in place at his premises for the total contract period and these

shall include the following:

a. Safety Management Structure and Compliance to these.

b. Statutory Appointments.

c. Records and documentation of all Risk and Hazard Analyses.

d. Planned Job Observations Records and Documents.

e. Employment history and records of all personnel, part-time or full-time or contract labour.

f. Medical History of all personnel, part-time or full-time or contract labour

g. Training and Competency Records with regard to Safety, Health and Environment.

h. Training and Competency Records with regard to the skills he uses to carry out the works or any other works in the Employers premises.

i. Compensation Commissioner records and proof of registration.

j. Records and documentation with regard to any sub-contractor or labour-only contracts he places or uses to carry out the works or any other works in Employers premises.

k. Personal Protective Equipment and Safety Equipment Inspection, training and competency records and documentation.

l. Employment contracts for all sub-contractor or labour-only contracts.

m. Compliance to a Safety System, such as NOSA or any other system that is similar in nature.

n. Records of all incidents or accidents, and vehicle accidents, incurred during execution of this works or any other works in the Employers premises.

o. Records of all man-hours, including sub-contractors or labour-only contracts, the Contractor spends on the Employers premises.

p. Written Safe Work Procedures for all hazardous tasks the Contractor executes on the Employers premises.

q. A Fall Protection Plan for all elevated work the Contractor does on the Employers premises.

r. Environmental Plan and awareness training.

s. Induction training records of his staff by himself/herself.

t. Minimum wage compliance for the different skills and to which Bargaining Council

compliance is made to and proof of membership, if any.

u. Risk Assessment of this type of works

v. Proof of authorisation/accreditation from Department of Labour and or other Statutory Body for this type of works, if applicable

w. Emergency Evacuation and Rescue Plan for the hazardous tasks related to the works.

Specific Risks

23) The following risks are identified by the Employer and Contractor specifically addresses these risks
to ensure that the works is carried out safely:

a. Working at heights
b. High temperatures
c. Low temperatures
d. High pressures
e. High voltage
f. Windy conditions
g. Dusty conditions
h. High noise area
i. Work is being carried out overhead
j. Work is being carried out below
k. Possibility of drowning exists
l. Work in confined spaces
m. Possibility of noxious gasses
n. Possibility of steam release
o. Possibility of fires or explosions
p. Chemicals
q. Biological Hazards

24) Gaskets used are fit for the type of liquid, solid or gas being transported and do not contain any asbestos fibres.

25) The ash dust is harmful if inhaled and the Contractor provides proper dust masks to all his personnel working in dusty environments.

Plant Safety Regulations

26) The Employer, on request from the Contractor, isolates required plant from all sources of danger as described in the Plant Safety Regulations.

27) The Project Manager, on request, makes available a copy of the latest revision of the Plant Safety Regulations available to the Contractor.

29) The Contractor conforms to all rules and regulations applicable to plant safety and completes the Workman's Register prior to working on the plant.

30) The Contractor declares any grinding and welding to be carried out on the workers register.

31) At every permit change the Contractor withdraws himself/herself/his staff for that period of permit suspension/revocation and thereafter only proceeds with the works after signing onto the new permit.

32) The Contractor ensures that he/she/all sub-contractors/personnel/staff/his visitors are medically, physically and psychologically fit to enter the Duvha Power Station, and specifically any confined space.

33) The Contractor is prohibited from entering Radiation Areas.

34) The onus is on the Contractor to ensure that the correct confined space requirements and tests have been done/met by the Employer prior to entry into any confined space or hazardous plant areas.

35) The Contractor ensures that all personnel are competent to carry out the works.

36) Proof of competency for technical and safety aspects must be available as and when required on site.

Limited Access Register (LAR)

37) The LAR is for the person in charge of the plant to maintain control over activities taking place on his plant that are not covered by the Plant Safety Regulation and Operating Regulations for High Voltage Systems.

38) Activities that are allowed to be carried out under the LAR must not require a permit and must satisfy the following criteria:

39) They must not involve danger to the person carrying out the activity;

40) No plant isolations must be required;

41) The activity must be performed by a skilled person and there must be no risk of a production loss;

42) The duration of the activity must be less than 24 hours

43) The Supervisor accompanies the Contractor during the first instances of working under a LAR on a specific plant area.

44) It is very important that the person who plans to do an activity on a plant under the LAR informs the person in charge of the plant (ASS on the panel or PPO at WTP) of what will be done.

45) This means verbally telling the person in charge of the plant what will be done and not just signing the LAR book. The LAR book is also signed.

46) It is also important that as soon as the activity is completed the person, who was doing the activity, notify (verbally) the person in charge of the plant that conditions are back to normal and that the LAR has been signed off. Just signing the LAR book is not sufficient.

47) For more information please refer to Plant Safety Regulation C11.

Fire precautions

48) Any tampering with the Employer's fire equipment is strictly forbidden.

49) All exit doors, fire escape routes, walkways, stairways, stair landings and access to electrical distribution boards must be kept free of obstruction, and not be used for work or storage at any time.
Fire fighting equipment remains accessible at all times.

50) In case of a fire, report the location and extent of the fire to the Electrical Operating Desk at extension 2222.

51) Take the necessary action to safe guard the area to prevent injury and spreading of the fire.

52) Reporting of accidents

53) The Employer follows an accident prevention policy that includes the investigation of all accidents involving personnel and property. This is done with the intention of introducing control measures to prevent a recurrence of the same incidents.

54) The Contractor is expected to fully co-operate to achieve this objective.

55) The Project Manager is informed immediately of any Category B or C incidents. Category A incidents and any damage to property or equipment must be reported to the Supervisor within 24 hours.

56) Radiation incidents must be reported immediately.

57) In reporting Category C and D incidents, the Contractor submits the following documents, or any additional as required by the Employers investigation team.

a. Proof of Contract of Employment.

b. Proof of WCL notification to Department of Labour.

c. Proof of Medical Doctors Note/Certificate detailing nature of injury and period of rest.

d. Death Certificate, if Category C fatality.

e. Risk and Hazard Analysis, if not in place prior to injury.

f. Written Safe Working Procedure, if not in place prior to injury.

NOTE! This report does not relieve the Contractor of his legal obligation to report certain incidents to the Department of Labour, or to keep records in terms of the Occupational Health and Safety Act, and Compensation for Occupational Injuries and Diseases Act.

Occupational Health and Safety Act 1993 - SECTION 37

58) The Contractor and Employer agrees to the arrangements and procedures between them to ensure compliance by the main Contractor (as the mandatory) with the provisions of Section 37.2 of the Occupational Health and Safety Act, No 85 of 1993.

59) The Contractor complies with:

a. the Occupational Health and Safety Act, 1993, and all Regulations made hereunder;

b. all Eskom Safety and Operating Procedures.

60) The Contractor acknowledges that he 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 received sufficient safety training to ensure that they can comply therewith.

61) 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.

62) The Contractor appoints a person who liaises with the Eskom Safety Officer responsible for the premises relevant to the Contract.

63) The person so appointed on request:

a. supplies the Eskom Safety Officer with copies of minutes of all Health and Safety Committee meetings, whenever he is required to do so;

b. supplies the Eskom Safety Officer with copies of all appointments in respect of employees employed on this Contract, in terms of the Act and Regulations and notifies the Eskom Safety Officer of any changes thereto.

64) Eskom may, at any stage during the currency of this agreement, be entitled to:

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

b. Refuse any employee, Subcontractor or agent of the Contractor access to its premises if such person has been found to commit any unsafe act or any unsafe working practice or is found to be not authorised or qualified in terms of the Act;

c. 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 the Occupational Health and Safety Act - 1993 and all Regulations made there under as well as all Eskom Safety and Operating Procedures.

65) No extension of time will be allowed, as a result of any action taken by Eskom in terms of the foregoing Clause and the Contractor has no claim against Eskom as a result thereof.

Hazardous Substances

66) It is required in terms of the General Administrative Regulation (Regulation 7) that any Manufacture,

Importer, Seller or Supplier of hazardous chemical substance supplies the receiver, free of charge,

with sufficient information for the user.

Radiation protection

67) The Contractor conforms to Duvha procedure HMS0002 when performing any industrial radiography.

Thermal insulation containing asbestos.

68) The Contractor does not disturb any thermal insulating material on the plant until it has been

positively identified as not containing asbestos. Approval is obtained from the Supervisor before any

thermal insulation is disturbed.

69) All stripping of asbestos material is undertaken strictly in accordance with the Employer's Standard,

SAP 0022, available from Safety Risk Management.

70) The Project Manager advises the Contractor whether areas that are to be stripped of lagging have

been identified as containing asbestos.

71) The Contractor is obliged to ascertain from the Project Manager in advance whether areas required

to be stripped, are non-asbestos. Any contractor, other than the contractor appointed to remove

asbestos strips no lagging material containing asbestos fibres.

72) The Contractor appointed to remove asbestos, does not begin removal without first obtaining the

necessary permission from the Deputy Director of Labour and the Project Manager.

Barricading and screens

73) The Contractor provides and installs barricades and warning devices to ensure that equipment and

persons are not exposed to danger or to prevent access to dangerous areas.

74) Additional to barricading, the Contractor installs screening, such as black plastic, on the roadside to

keep dust away from the road. This is in the interest of transport safety.

75) All welding, flame cutting and grinding work is prohibited inside and directly outside the fabric filter

plant area. All such work is done on ground level.

76) All gratings are covered with adequate protective screening when welding or flame cutting in the

vicinity.

Housekeeping

77) The Contractors equipment does not impair the operation of the plant or access to the plant.

Vehicle Safety

78) No driver may disregard road signs, drive recklessly, exceed the speed limit, exceed the alcohol

limit, or do anything contrary to the National Road Traffic Act while on Eskom business.
79) No driver may drive a vehicle while holding a cellular or mobile telephone or radio in one or both
hands or with any other part of the body. A cellular or mobile telephone or radio equipment may only
be used while driving if such telephone or radio device is fitted with a hands-free device, otherwise it
must be switched off.
80) All drivers including contractor and contractor employees, when performing work for Eskom, must
ensure that they and their passengers remain seated and wear seatbelts at all times.
81) No employee may be transported in the back of an open vehicle.
82) No driver should park a car in such a way that it will be a hazard to other road users.
83) No driver may use a vehicle without being authorised.
84) No employee is allowed to drive any Eskom-owned or scheme vehicle if not in possession of a valid
national driver's licence as well as an Eskom driver permit.

1. Quality assurance requirements use the latest one

1) All work will be carried out under the CONSTANT Supervision of an Experienced Competent Supervisor.