NEC3 Term Service Contract (TSC3)

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

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

for **MAINTENANCE OF CIVIL STRUCTURES AND PROPERTIES AT DUVHA POWER STATION FOR THE DURATION OF 60 MONTHS**

Contents:		**No of pages**
Part C1	**Agreements & Contract Data**	**[●]**
Part C2	**Pricing Data**	**[●]**
Part C3	**Scope of Work**	**[●]**

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

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:

Maintenance of Civil Structures and Properties at Duvha Power Station for the duration of 60 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	The offered total of the Prices exclusive of VAT is	**R [●]**
	Sub total	**R [●]**
	Value Added Tax @ 15% is	**R [●]**
	The offered total of the amount due inclusive of VAT is[1]	**R [●]**
	(in words) **[●]**	

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

Signature(s) .....

Name(s) .....

Capacity .....

For the tenderer: .....

(Insert name and address of organisation)

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

Tenderer's CIDB registration number: .....

[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: Service 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 and signed original copy of this document, including the Schedule of Deviations (if any).

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	**[●]**	**[●]**

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 TSC3 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
	dispute resolution Option	**W1: Dispute resolution procedure**
	and secondary Options	
		X1: Price adjustment for inflation
		X2 Changes in the law
		X17: Low service damages
		X18: Limitation of liability
		X19: Task Order
		Z: *Additional conditions of contract*
	of the NEC3 Term Service Contract April 2013[2] (TSC3)	
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**
	Tel No.	**+27 13 690 0913**
	Fax No.	
10.1	The *Service Manager* is (name):	**Thulani Zondo**
	Address	**P O Box 2199 Witbank 1035**
	Tel	**013 296 3229**
	Fax	
	e-mail	**ZondoTa@eskom.co.za**
11.2(2)	The Affected Property is	**Duvha Power Station, Ikageng, Eskom Village,**

[2] Available from Engineering Contract Strategies Tel 011 803 3008 Fax 086 539 1902 www.ecs.co.za

		Sannieshof, Ash dams area and AWR pump-house and surrounding Eskom Properties.
11.2(13)	The *service* is	**Maintenance of Civil Structures and Properties at Duvha Power Station for the duration of 60 months.**
11.2(14)	The following matters will be included in the Risk Register	**None**
11.2(15)	The Service Information is in	**Part 3: Scope of Work and all documents and drawings to which it makes reference.**
12.2	The *law of the contract* is the law of	**the Republic of South Africa**
13.1	The *language of this contract* is	**English**
13.3	The *period for reply* is	**One weeks**
2	**The *Contractor*'s main responsibilities**	**Data required by this section of the core clauses is also provided by the *Contractor* in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data**
21.1	The *Contractor* submits a first plan for acceptance within	**Not applicable**
3	**Time**	
30.1	The *starting date* is.	**01 April 2026 or as soon as possible**
30.1	The *service period* is	**5 years (ending 31 March 2031 or depending on the contract start date)**
4	**Testing and defects**	**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**
5	**Payment**	
50.1	The *assessment interval* is	**between the 26 day of each successive month.**
51.1	The *currency of this contract* is the	**South African Rand**
51.2	The period within which payments are made is	**Within 60 days.**
51.4	The *interest rate* is	**the publicly quoted prime rate of interest (calculated on a 365 day year) charged by 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**	**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**
7	**Use of Equipment Plant and Materials**	**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	**Risks to be updated on the risk register as they arise**
9	**Termination**	**There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.**
10	**Data for main Option clause**	
A	**Priced contract with price list**	
20.5	The *Contractor* prepares forecasts of the final total of the Prices for the whole of the *service* at intervals no longer than	**six weeks.**
11	**Data for Option W1**	
W1.1	The *Adjudicator*	**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).**

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 Institution of Civil Engineers (London) (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	**Johannesburg, South Africa**
	The person or organisation who will choose an arbitrator - if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is	**the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.**
12	**Data for secondary Option clauses**	
X1	**Price adjustment for inflation**	
X1.1	The *base date* for indices is	**February 2026**

The proportions used to calculate the Price Adjustment Factor are:

proportion	**linked to index for**	**Index prepared by**
0.20	**Transport Index | Road Freight Costs Table L2B**	**SEIFSA**
0.15	**Material- General & Special Purpose Machinery- Table O -1 SEIFSA Statistics SA | PPI Selected Final and Intermediate Manufactured Goods**	**SEIFSA**
0.50	**Table C-3 (Labour)**	**SEIFSA**
0.15	**non-adjustable**	
1.00		

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.**
X17	**Low service damages**	
X17.1	The low service is	
	R2 000 per incident up to a maximum of 1% of the contract value.	Should a water leak occur within three months of repair carried out by the *Contractor*.
	R3 000 up to a maximum of 1% of the contract value.	For rework due to poor installation or sub-standard work.
	R5 000 for the first incident and R10 000 for any consecutive incidents up to 5% of the contract value.	For an environmental incident (violation or a contravention) due to proven poor maintenance or failure to address the notification timeously after being notified. (Excluded are any failures to equipment, structures not serviced by the Contractor, failure of components not supplied by the Contractor, service work performed using second-hand spares with permission given by the Service Manager, external factors -such as foreign objects coming into contact with the serviced item, poor operating practice, and any other factors that can be shown to be outside the direct control of the Contractor. The penalty will only be imposed on the Contractor after an investigation and the occurrence is found to be a result of poor maintenance by the Contractor.)
X18	**Limitation of liability**	
X18.1	The *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to	**Contract value**
X18.2	For any one event, the *Contractor*'s liability to the *Employer* for loss of or damage to the *Employer*'s property is limited to	**the amount of the deductibles relevant to the event**
X18.3	The *Contractor*'s liability for Defects due to his design of an item of Equipment is limited to	**The greater of** • **the total of the Prices at the Contract Date and** • **the amounts excluded and unrecoverable from the *Employer*'s insurance (other than the resulting physical damage to the *Employer*'s property which is not excluded) plus the applicable deductibles**
X18.4	The *Contractor*'s total liability to the *Employer*, for all matters arising under	**the total of the Prices other than for the additional excluded matters.**

	or in connection with this contract, other than the excluded matters, is limited to	**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, plan and specification,** • **Defects due to manufacture and fabrication outside the Affected Property,** • **loss of or damage to property (other than the *Employer*'s property, 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	**12 months after the end of the *service period*.** • **Priority 1 (safety and environment related) defect to be corrected within a week of being notified.** • **Priority 2 (production related) defect to be corrected within two weeks of being notified.** • **Any other defect (other than Priority 1 and 2) to be corrected within two months of being notified.**
X19	**Task Order**	
X19.5	The *Contractor* submits a Task Order programme to the *Service Manager* within	**5 days of receiving the Task Order**

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 *Service 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 *Service Manager* within thirty days of the notification or as otherwise instructed by the *Service 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 Service.

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 P4 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 *Service 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 Affected Property or any portion thereof, in the course of Providing the Service and after the end of the *service period*, requires the prior written consent of the *Service 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 *Service Manager* 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 *service*. 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 Affected Property;
- 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 the *service*; and
- undertakes, in and about the execution of the *service*, 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 *service*, 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 *Service 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 Service 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 the last paragraph of core clause 61.3 and replace with:

If the *Contractor* does not notify a compensation event within eight weeks of becoming aware of the event, he is not entitled to a change in the Prices.

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 82.1 is provided for in 60.1(12) and the *Employer*'s liability under the indemnity is limited to compensation as provided for in core clause 63 and X19.11 if Option X19 Task Order applies to this contract.

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 Ethics

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

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

Action Fraudulent Action or Obstructive Action.

Z11.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.

Z11.2 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.

Z11.3 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.

Z11.4 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.

Z12 Insurance

Z 12 .1 Replace core clause 83 with the following:

Insurance cover 83

83.1 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.

83.2 The *Contractor* provides the insurances stated in the Insurance Table A 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 minimum limit of indemnity
Loss of or damage caused by the *Contractor* to the *Employer*'s property	The replacement cost where not covered by the *Employer*'s insurance. The *Employer*'s policy deductible as at Contract Date, where covered by the *Employer*'s insurance.
Loss of or damage to Plant and Materials	The replacement cost where not covered by the *Employer*'s insurance. The *Employer*'s policy deductible as at Contract Date, where covered by the *Employer*'s insurance.
Loss of or damage to Equipment	The replacement cost where not covered by the *Employer*'s insurance.

	The *Employer*'s policy deductible as at Contract Date, where covered by the *Employer*'s insurance.
The *Contractor*'s liability for loss of or damage to property (except the *Employer*'s property, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor*) arising from or in connection with the *Contractor*'s Providing the Service	**Loss of or damage to property** The replacement cost **Bodily injury to or death of a person** The amount required by the 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 12.2 Replace core clause 86 with the following:

Insurance by the *Employer*

86

86.1 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 minimu limit 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

Z13 Nuclear Liability

Z13.1 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.

Z13.2 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*.

Z13.3 Subject to clause Z13.4 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*.

Z13.4 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.

Z13.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z14 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.

Z14.1 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.

Z14.2 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 Z14.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.

Z14.3 The *Employer* manages asbestos and ACM according to the Standard.

Z14.4 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.

Z14.5 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.

Z14.6 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.

Z14.7 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.

C1.2 Contract Data

Part two - Data provided by the *Contractor*

Notes to a tendering contractor:

1. Please read both the both the NEC3 Term Service Contract April 2013 and the relevant parts of its Guidance Notes (TSC3-GN)[3] in order to understand the implications of this Data which the tenderer is required to complete.
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(14)	The following matters will be included in the Risk Register	
11.2(15)	The Service Information for the *Contractor*'s plan is in:	
21.1	The plan identified in the Contract Data is contained in:	
24.1	The key people are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job	

[3] Available from Engineering Contract Strategies Tel 011 803 3008 Fax 086 5391902 or www.ecs.co.za

Responsibilities:

Qualifications:

Experience:

		CV's (and further key person's data including CVs) are in .
A	**Priced contract with price list**	
11.2(12)	The *price list* is in	
11.2(19)	The tendered total of the Prices is	**R**

PART 2: PRICING DATA
TSC3 Option A

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option A	2
C2.2	The *price list*	**[●]**

C2.1 Pricing assumptions: Option A

How work is priced and assessed for payment

Clause 11 in NEC3 Term Service Contract (TSC3) core clauses and Option A states:

Identified and defined terms 11 11.2

(12) The Price List is the *price list* unless later changed in accordance with this contract.

(17) The Price for Services Provided to Date is the total of

- the Price for each lump sum item in the Price List which the *Contractor* has completed and
- where a quantity is stated for an item in the Price List, an amount calculated by multiplying the quantity which the *Contractor* has completed by the rate.

(19) The Prices are the amounts stated in the Price column of the Price List. Where a quantity is stated for an item in the Price List, the Price is calculated by multiplying the quantity by the rate.

This confirms that Option A is a priced contract where the Prices are derived from a list of items of service which can be priced as lump sums or as expected quantities of service multiplied by a rate or a mix of both.

Function of the Price List

Clause 54.1 in Option A states: “Information in the Price List is not Service Information”. This confirms that instructions to do work or how it is to be done are not included in the Price List but in the Service Information. This is further confirmed by Clause 20.1 which states, “The *Contractor* Provides the Service in accordance with the Service Information”. Hence the *Contractor* does **not** Provide the Service in accordance with the Price List. The Price List is only a pricing document.

Link to the *Contractor*’s plan

Clause 21.4 states “The *Contractor* provides information which shows how each item description on the Price List relates to the operations on each plan which he submits for acceptance”. Hence when compiling the *price list*, the tendering contractor needs to develop his first clause 21.2 plan in such a way that operations shown on it can be priced in the *price list* and result in a satisfactory cash flow in terms of clause 11.2(17).

Preparing the *price list*

Before preparing the *price list*, both the *Employer* and tendering contractors should read the TSC3 Guidance Notes pages 14 and 15. In an Option A contract, either Party may have entered items into the *price list* either as a process of offer and acceptance (tendering) or by negotiation depending on the nature of the *service* to be provided. Alternatively the *Employer*, in his Instructions to Tenderers or in a Tender Schedule, may have listed some items that he requires the *Contractor* to include in the *price list* to be prepared and priced by him.

It is assumed that in preparing or finalising the *price list* the *Contractor:*

- Has taken account of the guidance given in the TSC3 Guidance Notes relevant to Option A;
- Understands the function of the Price List and how work is priced and paid for;
- Is aware of the need to link operations shown in his plan to items shown in the Price List;
- Has listed and priced items in the *price list* which are inclusive of everything necessary and incidental to Providing the Service in accordance with the Service Information, as it was at the time of tender, as well as correct any Defects not caused by an *Employer's* risk;
- Has priced work he decides not to show as a separate item within the Prices or rates of other listed items in order to fulfil the obligation to complete the *service* for the tendered total of the Prices.
- Understands there is no adjustment to items priced as lump sums if the amount, or quantity, of work within that item later turns out to be different to that which the *Contractor* estimated at time of tender. The only basis for a change to the (lump sum) Prices is as a result of a compensation event.

Format of the *price list*

(From the example given in an Appendix within the TSC3 Guidance Notes)

Entries in the first four columns in the *price list* in section C2.2 are made either by the *Employer* or the tendering contractor.

If the *Contractor* is to be paid an amount for the item which is not adjusted if the quantity of work in the item changes, the tendering contractor enters the amount in the Price column only, the Unit, Expected Quantity and Rate columns being left blank.

If the *Contractor* is to be paid an amount for an item of work which is the rate for the work multiplied by the quantity completed, the tendering contractor enters the rate which is then multiplied by the Expected Quantity to produce the Price, which is also entered.

If the *Contractor* is to be paid a Price for an item proportional to the length of time for which a service is provided, a unit of time is stated in the Unit column and the expected length of time (as a quantity of the stated units of time) is stated in the Expected Quantity column.

C2.2 the *price list*

Schedule A: Core crew normal time related costs

Item nr	Description	No.	Unit	Expected Quantity	Rate	Price
10	Site/ Project Manager	1	Hr	10380		
20	Site Supervisors (Civils)	2	Hr	10380		
30	Safety Officer	1	Hr	10380		
40	Carpenters	2	Hr	10380		
50	Plumbers	4	Hr	10380		
60	Painters	2	Hr	10380		
70	Bricklayers / Roofer	2	Hr	10380		
80	Tiler	2	Hr	10380		
90	Boilermaker	1	Hr	10380		
100	Unskilled labour	11	Hr	10380		
110	Tools and equipment	1	monthly	60		
120	LDV bakkies	2	monthly	60		
130	Consumables	1	monthly	60		
140	Employees home-work-home transport	1	monthly	60		
150	Standby allowance	sum	monthly	60		
160	SHEQ provision	sum	yearly	5		
170	P&G's	1	month	60		
180	Site Establishment	1	Sum	1		
190	De-establishment	1	Sum	1		
200	Inoculation for Hepatitis A for employees working on the sewage system (per person: supervisors, plumbers & assistants)	10	yearly	5		

The total of the Prices

Note:

1. Labour hours are based on 173 hours per month. The labour rate to make provision for leave pay as replacement employee/s is/are expected on site to maintain the same compliment while an employee/s is/are on leave.
2. Vehicle rate to include fuel and other associated costs.
3. SHEQ provision to be inclusive of all Safety, Health, Environmental and Quality related costs including SHEQ Training, PPE, (Note: Acid Proof is required for work in the Water Treatment Plant and Arc Flash PPE is required for Switchgear) costs per employee per annum.

Schedule B: Ad-hoc services/ Non- core crew skills

Item nr	Description	No.	Unit	Estimated Quantity	Rate	Price
10	Carpenters	1	Hr	3200		
20	Plumbers	1	Hr	3200		
30	Painters	1	Hr	3200		
40	Bricklayers/ Roofer	1	Hr	3200		
50	Boilermaker	1	Hr	3200		
60	Tiler	1	Hr	3200		
70	Unskilled labour	4	Hr	3200		
80	Medical exam and PPE for non-crew (per person per year)	1	person/year	20		
90	Travelling (return trip)	1	Each	450		
100	Inoculation for Hepatitis A for employees working on the sewage system (per person: supervisors, plumbers & assistants)	1	person/year	20		

Note: Travel radius shall be 40 km per return trip

The total of the Prices

Schedule C: Afterhours/Saturdays Overtime rates

Item nr	Description	Unit	Estimated Quantity	Rate	Price
10	Site/ Project Manager	Hr	2640		
20	Site Supervisor	Hr	2640		
30	Safety Officer	Hr	2640		
40	Carpenter	Hr	2640		
50	Plumber	Hr	2640		
60	Painter	Hr	2640		
70	Brick-layer/Roofer	Hr	2640		
80	Boilermaker	1	Hr	10380	
90	Unskilled labourer	Hr	2640		
100	Tiler	Hr	2640		
110	Travelling (return trip)	Each	720		

Note: Travel radius shall be 40 km per return trip

The total of the Prices

Schedule D: Sunday/Public Holidays Overtime rates

Item nr	Description	Unit	Estimated Quantity	Rate	Price
10	Site/ Project Manager	Hr	1200		
20	Site Supervisor	Hr	1200		
30	Safety Officer	Hr	1200		
40	Carpenter	Hr	1200		
50	Plumber	Hr	1200		
60	Painter	Hr	1200		
70	Brick-layer/ Roofer	Hr	1200		
80	Unskilled labour	Hr	1200		
90	Tiler	Hr	1200		
100	Boilermaker	Hr	1200		
110	Travelling (return trip)	Each	350		

Note: Travel radius shall be 40 km per return trip

The total of the Prices

Schedule E: Equipment rates

Item nr	Description	Unit	Expected Quantity	Rate	Price
10	Paint compressor	day	1000		
20	Concrete cutter machine	day	500		
30	Mobile Diesel Sludge Pump 120l/s	day	600		
40	Backhoe Loader (TLB) 11ton operating weight	day	800		
50	Cherry picker	day	420		
60	Vacuum truck	day	500		
70	5 kw diesel/petrol generator	day	500		
80	Diesel Mobile concrete mixer (400L) (for minor concrete works)	day	600		
90	Wacker plate compactor	day	600		

The total of the Prices

Note: Rate to include fuel costs, operator/s costs, etc

Schedule F: Services rates

Item nr	Description	Unit	Expected Quantity	Rate	Price
10.	Underground services detector (steel & plastic pipes, Electrical cables etc) and including Ground Penetration Radar Scans	day	500		
50	CCTV Pipeline (sewage and drainage pipe systems) Inspection	day	200		

The total of the Prices

NOTE: Rates to be inclusive of all costs.

Contractor:

…… …… ……
PRINT NAME SIGNATURE DATE

PART 3: SCOPE OF WORK

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

C3.1: EMPLOYER'S SERVICE INFORMATION

Table of Contents

1. Description of the *service*

1.1 Executive overview

The service is inspections and the maintenance of Duvha Power Station structures and properties for the duration of 60 months. The service rendered is to align with the Duvha Power Station Civil Maintenance Execution Strategy

1.2. *Employer*'s requirements for the *service*

The Employer's requirement for the service is to ensure the sustainability, safety and health of all the civil structures and properties at the power station.

Employer's requirements for the service are as follows;

- The Contractor provides a site core crew of qualified labour to carry daily routine maintenance, breakdown and emergency maintenance repairs.
- The Contractor provides tools, gear, equipment, spares material and consumables to carry out the work.
- The Contractor ensures the safety of own personnel, other contractors and Eskom employees in the vicinity of the works by complying with the OHS Act No.85 of 1993 and its Regulations.
- The Contractor conforms to Work-at-Height Training Requirements for Contractors Performing Work for Eskom. All Contractor employees who will be working at height are required to have undergone working at height training as per Eskom Work at Height Standard (32-418).
- The Contractor plans and executes the work and provides a detailed plan for each task.
- The Contractor performs quality control on own work as per pre-approved control plans.
- The Contractor performs work within the specified period and to the acceptable quality standard.
- The Contractor shall always provide the required Personnel Protective Equipment (PPE) to his employees including Acid Proof Overalls and Arc Flash PPE for access to Switch Gear Rooms and WTP (Water Treatment Plant).
- The Contractor is required to have a minimum of 3 (Three) Responsible Persons/Authorised supervisor/s as per the Eskom's Plant Safety Regulations within 6 months of the contract start date. The course will be provided free of charge by Duvha Power Station. It remains the Contractor's responsibility to book his personnel for the training.

- The Contractor provides for standby or afterhours work.

A. Scope of work

1.2.1.1. Core crew

The *Service Provider* provides a site core crew as stated in the *price list*, equipment and tools to perform daily routine maintenance, breakdown and emergency maintenance repairs. Maintenance includes monitoring, testing, inspecting, overhaul and repairs. Maintenance activities will be carried out according to the Eskom SAP Plant Maintenance system.

The core crew will work the same hours as Eskom employees to ensure oversight which currently are Mondays to Thursday 07:00 to 16:15 and Fridays 07:00 to 12:00 and the lunch break is from 12h00 – 12h30.
The normal labour hours will be taken as 173 hours per month per resource for assessment purposes.

It is very important that the Contractor keeps records of his people working including those of his Subcontractors. The *Service Manager* shall have access to them at any time. These records may be needed when assessing compensation events.
The site core crew will be as listed in the price list Part 1.

1.2.1.2. Standby/call-outs

The *Contractor* shall ensure availability of personnel to attend to breakdowns outside of normal hours. A weekly/monthly standby rooster must be provided. The standby team per week to be made of the following skills but additional resources maybe be requested depending on the size of the breakdown:

- 1x Supervisor
- 1x Plumber
- 1x Carpenter
- 1x Bricklayer
- 2x Unskilled labourer

Only the skill that is related to the breakdown, an assistant/unskilled labourer or labourers depending on the extent of the breakdown and a Supervisor shall respond to a call-out. The call-out hours will be based on the time entering the Duvha Power Station entrance gate and on

completion of the work. Call-outs traveling is limited to 30 min in each direction (1 hr in total) per call-out.

1.2.1.3. Services to be carried out

1.2.1.3.1. Plumbing

A. Plumbing services

- Unblocking the drains pipes, toilets and blocked pipes.
- Unblock and/or clean road drainage on the sides of the road.
- Install sewage lines.
- Install portable water lines and isolating valves in water supply line.
- Repair leaking pipes.
- Change damaged and old pipes.
- Installation of new toilets and cisterns, sewer pipe bends and elbows, rodding eye caps and inspection eye caps.
- Remove, repair & install geysers and hydroboil.
- Installation of fittings (taps, shower heads, toilet paper holders, stopcocks, soap dispensers etc)
- Loads and unloads materials.
- Performs other related duties as required.

B. Plumbing specifications and requirements

- Galvanised sheet iron pipes have seams at the back and shall be jointed with soldered slip joints.
- Pipes are fixed to walls, etc., with galvanised mild steel holderbats spaced at not exceeding 2 m centres with tails driven in or cut and pinned in 3:1 cement mortar.
- Unplasticized polyvinyl chloride pipes shall comply with SANS 11 and are jointed and fixed in accordance with the manufacturer's instructions.
- Pipes are fixed with standard aluminium alloy holderbats with tails driven in or cut and pinned in 3:1 cement mortar.
- Plastic and rubber traps comply with SANS 1322.
- Wash hand basins, sinks, washdown closet panes, urinals, cisterns and block channels of fireclay or vitreous China and with vitreous glazed finish comply with SANS 497 and the under-mentioned requirements:
- Hand operating flushing cisterns complies with SANS 821. Cisterns with automatic operation are fitted with flushing mechanism of corrosion free material and adjusted to flush at regular intervals.

- Flush pipes for high level cisterns comply with SANS 821 (Appendix X) and are of drawn galvanised steel.
- Flush pipes for low level cisterns comply with SANS 821 and are of plastic.
- Electric geysers comply with SANS 151. Descriptions are deemed to include for the necessary fixing, bolts and jointing to pipes.

Pipes And Fittings	**Specification**	**Class Or Type**
Concrete non pressure pipes	SANS 677	SC Type: Class B
Reinforced concrete pressure pipes	SANS 676	-
Vitrified clay sewer pipes and fittings	SANS 559	-
Fibre cement drainpipes	SANS 819	Class 3
Fibre cément pressure pipes (constant internal diameter type)	SANS 1223	-
Pitch impregnated fibre pipes, couplings, and fittings	SANS 921	Fittings shall be polypropylene
Cast iron pipes and fittings for use above ground in drainage installations	SANS 746	Type B Pipes
Unplasticized polyvinyl chloride (UPVC) pipes and fittings for cold water supply	SANS 966	-
Polypropylene pressure pipes	SANS 1315	-
Black polyethylene pipes for cold water supply	SANS 533	-
Cast iron fittings for fibre cement pressure pipes	SANS 546	-
Cast iron fittings up to 150 mm nominal bore and suitable for screwing to ISO R7 pipe threads	SANS 62	Medium class, galvanised
Copper and copper alloy tubing	SANS 460	Class 1 - above ground
Hard drawn copper tubing	SANS 460	Class 2 - under ground
Stainless steel pipes for use with compression fittings	BS 4127	Class 0 - above ground
Compression and capillary solder fittings for copper tubing	SANS 1067	-

1.2.1.3.2. Carpentry

A. Carpentry services

- Construct, remodel, retrofit and repair interior and exterior structures made of wood & drywall.
- Install and repair furniture.
- Remove, repair & install doors.
- Build required items including specialty furniture.
- Construct formwork into which concrete is poured.
- Build floors, wall frameworks (timber) and roofs, and lay timber floors.

- Ceiling repairs and all ceiling associated works
- Construct and erect prefabricated units
- Install door handles, hinges, locks, hardware, flooring underlay, insulating material and other fixtures.
- Measure, cut and install all types of glass, including wire glass, tempered glass and plexiglas, according to measurements.
- Removes and replaces broken glass in wood or metal framed openings.
- Repairs and replaces window hardware and door closures.
- Loads and unloads materials.
- Performs other related duties as required.

B. Carpentry specifications and requirements

Material	SANS Specification	Grade or class
Softwood structural timber	563	Stress Grade 4
Softwood engineering timber	1245	As specified
Softwood studs for timber frames in buildings	1146	-
Softwood brandering and battens	653	-
Softwood floor boarding	629	Flooring Grade
Softwood joinery timber	1359	-
Hardwood joinery timber	1099	Knotty grade
Hardwood for boarding	281	As specified
Wooden ceiling and panelling boarding	1039	As specified
Laminated timber (gluelam)	1460	As specified
Gypsum plasterboard	266	As specified
Gypsum cove cornice	622	-
Wood fibre building board	540	-
Wood fibre panels (cement bonded)	637	As specified
Fibre-cement sheets: profiled and flat	685	-
Fibre cement boards	803	As specified
Aluminium roofing sheets	903	As specified
Materials for thermal insulation for buildings	1381	-
Plywood and composite boards	929	As specified
Flush doors	545	-
Glass reinforced polyester laminated sheets	1150	-

Mild steel nails	820	-
Metal screws for woods	1171	-
Fasteners for sheet roof and wall coverings	1273	-
Creosote	538	-

1.2.1.3.1. Glazing

A. Glazing services

- Removes and replaces broken glass in wood or metal framed openings.
- All glass is cut to suit openings, with sufficient clearance all round to prevent cracking by expansion or contraction, vibration, etc.
- Unless otherwise described, the whole of the glass is to be well back puttied, sprigged as necessary and puttied.
- Sashes with glazing beads are built in with beads fixed in position and the Contractor allows for unscrewing the beads and refixing after glazing.
- Glass fixed without back putty with glazing beads in unpainted hardwood doors are bedded on strips or rubber, velvet, leather or felt turned over on to both sides of glass in the rebates to form a soft packing between the glass and the woodwork. In all other cases the glass is well bedded in back putty in the rebates.
- No soft or oily putty is to be covered by paintwork until rectified. All putty forms a surface crust and has a smooth finish before any paint is applied. A priming coat is applied to the putty within seven days of putty being applied.

B. Glass specification and requirements

- Glass complies with BS 952.
- Unless otherwise described, ordinary glazing is clear float glass of "Glazing Quality" polished plate glass of "Glazing Quality", laminated safety glass of "Selected Quality".
- Unless otherwise described float glass in panes not exceeding 0.5 m² are of 3 mm thickness and float glass in panes exceeding 0.5 m2 and not exceeding 1.5 m² are 4 mm thickness.
- Obscure glass for glazing, unless otherwise specified, are Pacific or other similar accepted figured rolled glass, of a nominal thickness of not less than 4 mm for glass panes up to a surface of 0.5 m² and not less than 5 mm over 0.5 m².
- Glazing is executed in accordance with SANS 10137.

- Special glass such as heat-reflecting, toughened or laminated glass and glass units with sealed edges are fixed in accordance with the manufacturer's instructions.

C. Putty specification and requirements

- Glazing putty complies with SANS 680 and is Type I for wooden sashes and Type II for steel sashes. Putty for glazing to unpainted hardwood is tinted to match the colour of the wood.
- Back putty does not exceed 3 mm thick. Soft or oily putty is not painted and if the putty does not form a surface crust it is to be replaced.
- Butyl putty is used where glass is to be fixed in aluminium sashes with glazing beads.
- Non-setting compounds are used where laminated glass is fixed in sashes with glazing beads.
- Silicone-rubber-base sealing compounds comply with SANS 1305.

D. Mirrors specification and requirements

- Silvered mirrors comply with SANS 1236 Class A

1.2.1.3.2. Tiling

A. Tiling services

- Do surface preparations before installing tiles, takes measurement and advice on tile materials, designs, and colour.
- Remove and install floor and wall tiles.
- Remove and install vinyl floor tiles.
- Install new tiles in areas where there are modifications and new request.
- Remove and install skirting.
- Loads and unloads materials.
- Performs other related duties as required.

B. Tiling specifications and requirements

- Tiles, mosaics, etc., shall be even in shape and size, free from cracks, twists or blemishes and uniform in colour.

Glazed ceramic wall tiles and fittings comply with SANS 22.

- Tiles are fixed in accordance with SANS 10107. All tiles are dipped in water before fixing and bedded in 3:1 sand/cement mortar backing to true and even surfaces. Horizontal and vertical joints are straight and continuous, and all joints are rubbed in solid with neat white cement grout and finished off. Tiles are set out from the top and only the bottom tiles may

be cut. Great care is taken to avoid scratching the tiles during fixing and cleaning. Damaged tiles are taken out and replaced at the *Contractor's* expense.

- Descriptions of tiling is deemed to include for necessary preparatory work, beds, and backings (as distinct from plaster or screeds which are measured separately), symmetrical arrangement of tiling with cutting along both sides of panels and for square cutting.

Floor Tiling

- On a concrete floor, tiles shall be well soaked in water before laying and solidly bedded in 3:1 sand/cement mortar and flush pointed on all exposed faces with semi dry cement mortar pressed in. No account may liquid grout be poured on.
- Where specified as adhesive fixed, tiles are fixed to adequately cured plaster backing or screeded bedding in strict accordance with the recommendations of the adhesive manufacturer and with an adhesive accepted by the manufacturer of the tiles.

Vinyl Flooring

- Vinyl flooring complies with EN 14041: 2004
- On a concrete floor, vinyl flooring tiles shall be well applied with in adhesive glue before laying on the floor.
- The vinyl flooring must have the following properties;
  - non-directional design,
  - high attraction anti-slip protection,
  - best abrasion resistance, very high resistance to traffic,
  - improved resistance to scratching and scuffing,
  - hard wearing and long lasting (meant for power plant environment),
- Where specified as adhesive fixed, tiles are fixed to adequately cured plaster backing or screeded bedding in strict accordance with the recommendations of the adhesive manufacturer and with an adhesive accepted by the manufacturer of the tiles.

1.2.1.3.3. Painting

A. Painting services

- Prepare, prime, sand, seal, patch and paint furniture, surfaces, buildings, and fixtures utilizing all types of painting materials such as varnish, lacquer, shellac, enamel, latex, epoxy, water-proofing and heat resistant finishes.
- Tapes, flushes, repairs and applies texturing, wallpaper, and acoustic layers on a variety of surfaces. Adjusts colours when necessary; utilizes enhanced finishing skills when appropriate.
- Operate, clean and maintain all painting equipment, including brush, roll, sprayers and electrostatic sprayers, pumps, etc. Safely stores and labels all materials.
- Offers assistance and advice on materials, designs, and colour.

- Loads and unloads materials.
- Urethane based paint is to be used for concrete surfaces.
- The items to be coated shall be prepared in accordance with Clause 4.1.1 of the SANS 1217 and, in particular, shall have edges ground to a radius of curvature of at least 3 mm.
- Remove and install waterproof membrane and sealant on buildings and carport roof sheets
- Apply epoxy and sealant on the building roof sheets and wall joints to improve waterproofing.
- Colour coding:
  - ❖ Golden yellow (B49) for demarcation lines
  - ❖ Pastel grey (G54) for working areas
  - ❖ Golden yellow for No storage areas
  - ❖ Brilliant green (H10) for aisles and walkways
  - ❖ Terracotta (A10) for storage areas
  - ❖ Black for Stanchions
  - ❖ Golden Yellow (B49) for Horizontal Rails and Chains
  - ❖ Black and yellow (B49) diagonal stripes 45º for protrusion, sides of ramps concrete plinths, solid covers on the floor. Lines with a minimum width of 50 mm.
  - ❖ Light orange (B26) for protruding shafts, exposed gear wheels and rotating parts
  - ❖ Signal red (A11) for equipment and pipe work.

B. Painting specifications and requirements

Material	**SANS**	**Grade or Type**
Priming coats on structural steel	312	Grade I
Priming coats on steel	679	Type I
Priming coats on galvanised iron	723	-
Red oxide zinc chromate primer	909	-
Priming coats on wood for external work	678	Type I
Priming coats on wood for internal work	678	Type III
Undercoats for paint (except emulsion paint)	681	Type I
Distemper	322	-
Emulsion paint for internal work	633	Grade I

Emulsion paint for external work	634	Synthetic Polymer base
Matt, eggshell, or semi-gloss paint for internal work	515	-
Oil gloss paint for internal and external work	631	-
High gloss enamel paint for internal and external work	627	Grade I
Roof paint	633	Type B
Structural steel paint	684	Type B
Aluminium paint	682	Grade II
Varnish for interior use	887	Type I

1.2.1.3.4. Masonry (bricklaying)

a) Bricklaying

- Erect new brick walls
- Repair existing brickwork and walls.
- Cast and compact fresh concrete on various plant areas.
- Erection of formwork/ shutter boards for preparing and shaping concrete where required.
- Concrete finish will be advised by the client for different areas.
- Install and fixing of brickwork and cracks reinforcement steel.
- Remove and install floor and wall tiles.
- Replace broken paving bricks with similar brick specification of interlocking bricks.
- Surface prepare the areas before replacing or repair pavement.
- Repair settled areas where uneven surfaces has developed. Reinstate sagged areas to correct levels as instructed by the client.
- Compaction is required in all disturbed areas to the desired compaction rate.
- Material for interlocking paving bricks shall conform to SANS 1058.
- Loads and unloads materials
- Performs other related duties as required.

b) Demolition

- Demolition of redundant structures as instructed.
- Demolished rubble to be correctly disposed into disposal skips.

c) Concrete specifications and standards

- SANS 50197-1: Cement - Part 1: Composition, specifications and conformity criteria for common cements
- SANS 1083: Aggregates from natural sources
- Cement to be CEM 1 52.5N - general-purpose cement unless stated otherwise
- Reinforcement steel shall comply to SANS 10144
- SANS 10400; National Building Regulations
- Concrete used for repair work should have adequate flexural strength and good dimensional stability. The concrete should be placed, compacted and finished to acceptable dimensional tolerances and surface texture.

d) Masonry specifications and requirement

List of applicable standards for masonry works.

Code	**Description**
SABS 029	Comprehensive model building regulations Chapter 8: Masonry and walling
SANS 1206	Masonry units
SANS 227	Burnt clay masonry units
SANS 285	Calcium silicate masonry units
SANS 1215	Concrete masonry units
SANS 2001 CM1	Construction works Part CM1 – Masonry walling
SANS 10073	The safe application of masonry-type facings to buildings
SANS 10145	Concrete masonry construction
SANS 10249	Masonry walling
SANS 50413	Masonry cement
SANS 50771	Specification for masonry units

e) Specification data associated with SANS 2001 CM1 – Masonry walling

Clause/No	**Specification Data**
Essential data	
4.1	**Materials**

4.1.1.2	Burnt Clay masonry units complies with the requirements of SANS 227 and have the following properties: • Class of unit: FBS • Foundation brickwork: NFX • Internal brickwork: NFP • Face Brick: FBS • Work size: 222 x 106 x 73mm • Colour of the face units: o Dark: Country Meadow Satin o Light: Opal Satin • Nature of the unit: Manufacturer's Specification • Uniformity of colour and texture: Required • Nominal compressive strength (non-facing): o Foundation brickwork: NFX – 7.5 MPa minimum. o Internal brickwork: NFP– 7.5 MPa minimum. o Face Brick: FBS – 12.5 MPa • Grade (efflorescence): o Foundation brickwork: Normal o Internal brickwork: Normal o Face Brick: Special • Limit of water absorption: Refer to 4.7 of SANS 227 • Limit of water-soluble salts content: Refer to 4.7 of SANS 227 • Limits of selected radicals: Refer to 4.7 of SANS 227 • Limits of pH value of water extracts: Refer to 4.7 of SANS 227 • Limits of moisture expansion: Refer to 4.7 of SANS 227 The quality verification are as follows: See Appendix F of SANS 227. The test for efflorescence is required.
4.1.4.1	Sands that comply with the requirements of SANS 1090 are required.
4.1.6	Mortar plasticizers and set-retarder admixtures are permitted.
4.1.9.1.2	Brick forces are galvanised.
4.1.9.2.2	Rod reinforcements are galvanised
4.1.12.1	Wall ties in cavity walls are of the butterfly type.
4.1.12.1	Only galvanised steel wall ties are used.
4.1.13.2	Internal steel door frames are galvanised.
4.2	**Mortar**
4.2.1.2	Mortar plasticizers and set-retarder admixtures are permitted
4.6.3.1	Reference panels are required
4.16	Roof anchors are in accordance with the requirements of SANS 10400
5	**Compliance with Requirements**
5.1.1	The degree of accuracy shall be II
Variations	

CM1. V.1	With reference to Clause 4.1.13: All other door and window frames are bronzed anodised aluminium.

f) List of applicable standards for foundations of masonry walling

Code	**Description**
SANS 517	Light steel frame building
SANS 952-1	Polymer film for damp-proofing and waterproofing in buildings. Part 1: Monofilament and co-extruded products
SANS 2001 CM2	Construction works Part CM2 – Strip footings, pad footings and slab on-the-ground foundations for masonry walling
SANS 1200 F	Standardized specification for civil engineering construction Section F: Piling
SANS 10100	The structural use of concrete
SANS 10400 H	The application of the National Building Regulations Part H: Foundations
SANS 101400 J	The application of the National Building Regulations Part J: Floors
SANS 10161	The design of foundations for buildings

g) Specification data associated with SANS 2001 EM1 – Cement plaster**.**

Clause/No	**Specification Data**
Essential data	
4.1	**Materials**
4.1.6.2	This clause is deleted and replaced with the following: “Admixtures are allowed to the mixes to improve workability or to improve the properties of the finished plaster, provided that the data sheets for such have been submitted to the *Project Manager* for review and acceptance prior to use”
4.2	**Methods and procedures**
4.2.3.2	Single-coat plaster: 10mm to 12mm
5.0	**Compliance with the requirements**
	The permissible deviations in plaster shall not exceed 4mm under a 2m straight edge
Additional clauses	
EM1. A.1	All cracks, blisters and other defects are carefully cut out and made good and the whole of the plaster work is to be left in perfect and clean

	condition on completion.

1.2.1.3.5. Earthworks (plumbing pipework)

a) Excavations

- Excavate in soft and hard material for various depths depending on the type and purpose of the excavation.
- Excavation for construction, underground services expose and/or installations.
- Excavate to dispose material to a dumping site of not more than 10 km.
- Excavate to re-use as backfilling material.
- Excavation to re-use as backfilling material is inclusive of compaction of soil material in layers as instructed by the client.
- Compacted layer works must be tested for compaction as per MOD AASHTO requirements.

b) Borrow to fill material (G5)

- Supply and lay selected material.
- Compact material in layers as instructed by the client.
- Earthworks specifications and standards
  - ❖ SANS 1200 D: Earthworks
  - ❖ SANS 1200 BD: Earthworks (Pipe trenches)

c) Specification data associated with SANS 2001 BE1 – Earthworks

Clause/No	**Specification data**
Essential data	
4.1	**Materials**
4.1.5.2	Materials from excavation is disposed of as follows: Suitable materials intended for re-use are stockpiled in an area provide the Contract Manager Material suitability is determined by the intended re-use of the material. Where temporary stockpiles hold materials intended for rehabilitation of ground, stockpiles that can deteriorate if exposed are protected against erosion and weathering. Unsuitable materials not intended for re-use are removed from the work site and disposed of at a location accepted by the Contract Manager. Materials are disposed of in accordance with local and national laws and regulations.

4.2	**Methods and procedures**
4.2.1.1	All areas in which excavation is to take place or that are to be covered by terraces, banks or structures is cleared in accordance with the requirements of SANS 2001-BS1.
4.2.1.2	Topsoil is conserved for later use in the following manner: Vegetation intended for re-use is removed to a location provide the Contract Manager and is neatly stacked and regularly watered and tended until required for replanting. Topsoil intended for re-use is stock-piled and/or spread in a location provide the Contract Manager
4.2.1.3	The overburden is stripped and removed to depth of 300mm.
4.2.3	Surplus and unsuitable material are removed from the work site and disposed of at a location accepted by the Contract Manager. Materials are disposed of in accordance with local and national laws and regulations.
Additional Clauses	
BE1.A.1	Excavation Classification The *Contractor* uses any method he chooses to excavate any class of material, but his chosen method of excavation does not determine the classification of the excavation. The *Contractor* uses guidelines for excavation classification and methods set out by SANS 1200D Section 3.1.
BE1.A.2	The *Contractor* notifies the *Contract Manager* of his intention to excavate 3 days prior excavation for planned works, no excavation work to commence without the presence of the *Contract Manager.* The *Contractor* does not excavate before a method statement, excavation permits, and underground services scans are submitted and accepted by the Contract Manager.

1.2.1.3.6. Roof Sheeting, Cladding, Drainage and Structure

a) Roof structures

- Replace damaged roof timber truss, purlins and rafters members.
- Replace damaged facia boards and barge boards.
- Replacement of a damaged structure will be like for like replacement, should the type of structure become unavailable on the market a similar type shall be used. Approval must be granted by the client prior procurement of the structure.

- Secure loose members by installing missing supports (screws, nails, welds)
- Roof structures includes the main plant(units), workshops, general buildings, pump houses, etc
- SANS 10243: The Manufacture and erection of timber trusses.

b) Roof drainage

- Clean blocked or removal of debris from gutters, roof sumps and downwards pipes by means high pressure equipment.
- Replace gutters and downwards pipes.
- Secure loose, misaligned or install missing sections of gutters, sumps and downwards pipes. Including drainage accessories (clamps, flashings, supports, etc)
- Station roof drainage for the main plant, workshops and pump houses were designed specifically for the station; therefore fabrication to match existing drainage in the plant is required whenever a need for repairs or replacement is arises.
- Roof drainage for general buildings (permanent and pre-fabricated structures) are standard drainage design and sizes can be obtained off shelves from suppliers.

1.2.1.3.7. Underground and Hidden Services scanning

- Conduct scans for the purpose of identifying hidden services through concrete slabs, bitumen roads or natural ground.
- Scans are required in areas suspected to have hidden services before breaking of structures or excavating through the ground (not more than 3m deep underground).
- After conducting the underground services scans, the *Contractor* provides and submits the underground scanning report to the *Service Manager* for acceptance.
- Scanning equipment shall be compatible to identify/detect:
  - ❖ Electrical cables
  - ❖ Pipes (plastic, steel and concrete/asbestos pipes)

1.2.1.4. Civil, Plant structures and Properties to be maintained

The works consist of the repairs and maintenance of the Civil, Plant Structures and Properties listed below. The repairs and maintenance of the structures will include but not limited to structural defects such as steel structural deformation, corrosion, concrete cracks, spalling and any other deterioration in the structures mentioned below.

1.2.1.4.1. Chimney Structures (Smoke Stacks)

The two chimneys are nearly identical and the constructed height is 300m above the terrace level. The chimney structures consist of:

- concrete windshield with 3 brick lined concrete flues serving three generating units.
- The shell for the windshield and flues for chimney no 1 was constructed by means of a jump shutter system
- The shell for the windshield and flues for chimney no 2 by means of a continuous sliding formwork system.
- The chimney has steel structural access platforms with steel floor slabs in different intervals though out the structure.

1.2.1.4.2. Cooling Towers

There are six wet cooling tower systems in the station and are nearly identical. The main components of a cooling tower structure are as follows:

- Shell which is concreted in rings by means of a climbing formwork system
- Outer and inner surface
- Supporting concrete columns
- Ring beam foundation
- Cooling pond with concrete floor and wall
- Cooling Tower duct construction joints
- Water distribution channels
- Packing and drift eliminators supports
- Walkways with steel handrails.
- Screens washing bay structure with lifting beams
- Interlock paving bricks around the cooling tower pond with storm water drainage system

1.2.1.4.3. Buildings

1.2.1.4.3.1. Permanent Buildings

These buildings are constructed of brick walls and IBR roof sheeting, with steel windows and doors in terms of SANS 10400 which includes the following buildings: Maintenance of the buildings includes the architectural finishing

- Main Administration building:
- Medical & Fire Station buildings;
- Access Control buildings;
- Old Simulator buildings;
- Compressor building

- Ablution blocks;
- Shisataba building;
- Main Canteen building complex;
- Hydrogen Plant Building ;
- South and North Water Treatment Plant / Laboratory building complex
- Electrical Workshop / Technical Training building
- Welders and Platers Workshop building
- Oil Burner Workshop
- Mogolo building
- Coal management building
- Heavy Maintenance Workshop
- Main Stores Building
- Steam Cleaning building
- Shot Blasting building
- Resin Store Building
- Gas Store building
- Outside Plant Control building
- Steel stores/ outage store
- C&I Maintenance outside plant building
- Sling stores
- South oil fuel plant building

1.2.1.4.3.2. Prefabricated buildings

Prefabricated buildings are mainly constructed of modular panels on a permanent concrete floor slab. Buildings on the premises that is classified as prefabricated buildings include:

- Outage Management Offices (main offices)
- CED offices
- Planners offices
- Operating support offices (2nd building)

1.2.1.4.3.3. Park homes

The buildings included in this category include prefabricated buildings which is based on the “park home” concept. The buildings included in this category includes:

- Operation support offices (main offices)
- Safety Risk Management offices

- Outage Management offices (2nd building)
- Auxiliary Engineering offices
- Project Management offices
- Transport Department offices
- IR and HR offices
- Old Simulator Parkhomes
- Two Parkhomes behind HMD Workshop

1.2.1.4.3.4. Structures

Power station structures are made of:

- Reinforced concrete structural elements (beams, slabs and roofs)
- Cladded roofs with structural steel supports
- Reinforced concrete supports with roof cladding.
- Structural element structures with side and roof cladding
- Reinforced concrete structures.
- Structural reinforced concrete foundations
- Structural steel portal frame and roof cladding
- Structural elements with roof cladding
- Multi storey structure with brick infill panels
- Brickwork structure with roof cladding

The power station structures included in this category includes:

- Boiler house structures
- Turbine house structures
- Coal Staiths
- Conveyor structures
- Precipitators & Fabric filter plant
- Ash Plant Sumps
- Auxiliary bays
- Pump houses
- Sub-stations

1.2.1.4.3.5. Services

Services at Duvha consist of:

- Storm water drains
- Storm water trenches

- Storm water V-ditch
- Sewage drains
- Portable water pipe (domestic water uses)
- Fire system water pipes
- Cooling Tower ducts

1.2.1.4.3.6. Properties maintenance

- Ikageng Sewage Plant
- Sunnieshof Parkhome, Houses & Guesthouse
- Eskom Village properties.
- Ash Dam Buildings and Parkhome
- Raw Water Dam Parkhome
- High Level Dam Parkhome
- AWR Pumphouse Parkhome
- Overland Conveyor Parkhome

1.3. Interpretation and terminology

The following abbreviations are used in this Service Information:

Abbreviation	Meaning given to the abbreviation
BS	British Standard
CCTV	Closed-Circuit Television
CSY	Coal Stock Yard
CW	Cooling Water
CBR	California Bearing Ratio
DCP	Dynamic Cone Penetrometer
HIRA	Hazard Identification and Risk Assessment
HMD	Heavy Maintenance Department
ISO	International Organization for Standardization
Mod AASHTO	Modified American Association of State Highway and Transport Officials

NEC	New Engineering Contract
OEM	Original Equipment Manufacturer
OHS Act	Occupational Health and Safety Act No.85 of 1993
RBO	Reliability Basis Optimisation
PPE	Personal Protective Equipment
PSR	Plant Safety Regulation
QC	Quality Control
QCP	Quality Control Plan
QM	Quality Management
SAMTRAC	Safety Management Training Course
SANAS	South African National Accreditation System
SANS	South African National Standard
SAP	Systems, Applications and Products in Data Processing
SHE	Safety, Health and Environment
SHEQ	Safety, Health, Environmental and Quality

2. Management strategy and start up.

2.1 Management meetings

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Daily progress & planning meetings	Daily for 30 min	Duvha Power Station	*Employer & Contractor*
Planning & Lockdown meeting	Weekly for 1 hr	Duvha Power Station	*Employer, Contractor and other dept's*
Overall contract progress and feedback	Monthly for 1 hr	Duvha Power Station	*Employer & Contractor*
Risk register and compensation events	1 hr when the need aries	Duvha Power Station	*Employer & Contractor*

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

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

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

The *Contractor* shall provide a Site/Project Manager to supervise, monitor, control and co-ordinate all activities during the execution of this contract.

The following key people must meet the minimum requirements tabled under each designation;
Site/Project Manager

- National Diploma in Building/ Civil Engineering
- Supervisory or Management or Project Management training/qualification

- Safety/Legislation training, e.g OHS Act, Legal liability, HIRA, Construction Regulations, Labour relations.
- Minimum five years post qualification experience in construction or maintenance environment
- Computer literate.
- Ability to obtain Authorisation as a 'Responsible Person" in terms of the Eskom Plant Safety Regulations at Duvha Power Station.
- Evaluation, analysing and decision-making skills.
- Manage and lead the team to ensure proper adherence to the contract scope and execution of all work by the team.
- Provide advice in respect to problems and possible solutions.
- Ensure adherence to legislative requirements.
- Ensuring compliance to the Eskom Quality requirements for engineering and construction in generation standard (QM 58 latest revision)

Safety Officer

- National Diploma in Safety Management
- SAMTRAC certificate and registered with the SACPCMP as a safety officer.
- Field experience on civil maintenance/structures for at least 2 years as a safety officer in the construction/civil/power plant industry

Supervisors

- N6 or National Diploma in Building/Civil Engineering
- Supervisory training
- Safety/Legislation training, e.g OHS Act, Legal Liability, HIRA, Construction Regulations, Labour relations.
- Minimum three years post qualification experience in civil maintenance environment.
- Ability to obtain Authorisation as a 'Responsible Person" in terms of the Eskom Plant Safety Regulations at Duvha Power Station.
- Control daily activities.
- Prioritise and allocate work.
- Monitor progress and report progress.
- Perform quality control.
- Ensure that work is carried out safely.
- Provide advice in respect to plant problems and possible solutions.
- Assist with recommissioning of plant and perform tests and inspections as required.

- Preparing and completion of quality control plans
- Perform plant inspections, identify defects and initiate corrective actions including closing of such defects.

Tradesmen (Bricklayers, Carpenters, Plumbers)

- Apprentice trained with a trade test and a minimum of 1-year previous relevant experience.
- Safety training.
- Work-at-Height training.
- Provide possible solutions in respect to plant problems and execute the tasks safely.
- Ability to obtain Authorisation as a ‘Responsible Person” in terms of the Eskom Plant Safety Regulations at Duvha Power Station.
- Ability to Carry Heavy Equipment (Including tools and equipment, loading and off-loading material)

Tradesmen (Painters & Tiler)

- Trade Certificate and a minimum of 1-year previous relevant experience.
- Safety training.
- Work-at-Height training.
- Provide possible solutions in respect to plant problems and execute the tasks safely.
- Ability to obtain Authorisation as a ‘Responsible Person” in terms of the Eskom Plant Safety Regulations at Duvha Power Station.
- Ability to Carry Heavy Equipment (Including tools and equipment, loading and off-loading material)

Tradesmen (Boilermaker)

- Trade Certificate and a minimum of 1-year previous relevant experience.
- Safety training.
- Work-at-Height training.
- Provide possible solutions in respect to plant problems and execute the tasks safely.
- Ability to obtain Authorisation as a ‘Responsible Person” in terms of the Eskom Plant Safety Regulations at Duvha Power Station.
- Ability to Carry Heavy Equipment (Including tools and equipment, loading and off-loading material)

2.3 Documentation control

- All procedures, work instructions, forms and all contractual communications must be controlled for the duration of the contract.
- The following will appear on all controlled documentation as a title page, page header or page footer:
    - ❖ Title
    - ❖ Document Unique identifier
    - ❖ Revision number, original documents will be noted as revision 0. All subsequent revisions will be number sequentially (1, 2, 3, 4….)
    - ❖ Revision Date
    - ❖ Date when document was last changed. This date will change with each revision.
    - ❖ Effective Date
    - ❖ Date when document first came into use. This date will not change as the document is revised.

- All contractual communications will be in the form of properly compiled letters or forms attached to emails and not as a message in the email itself.
- Inspections reports to be compiled and submitted within one week.
- Data package after all the work has been finished to be submitted within one week after the repairs.
- Formal and informal communications will be in writing between the *Service Manager* and the *Contractor* only, any agreements between the *Contractor* and any other person representing the *Employer* which has not been delegated by the *Service Manager* will be invalid. Any instructions written or verbal resulting in any changes to the duration, quality, cost of the project may only be received from the *Service Manager*.

2.4 Invoicing and payment

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.

The Contractor shall address the tax invoice to Eskom Holdings Limited's VAT (4740101508) and Company Registration Number (2002/015527/06). The tax invoice shall be saved in PDF and sent to invoiceseskomlocal@mp2rc110.eskom.co.za and include on each invoice the following information:

Name and address of the *Contractor* and the *Service Manager;*

The contract number and title;

Contractor's VAT registration number;

The *Employer*'s VAT registration number 4740101508;

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

Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT; (add other as required).

2.5 Records of Defined Cost to be kept by the *Contractor*

The *Contractor* keeps accurate and complete books of accounts, records and other evidence relating to the Actual Cost. Records and accounts must reflect all work done on the contract. These are open to audit. All documentation is kept by the *Contractor* for a period of three years following completion of this contract. This information must be always kept up to date.

The *Contractor* may be requested to submit to the delegated *Service Manager* proof of costs incurred, which may include the following*:*

- the number and grading of employees within the Working Areas
- the number and grading of employees outside the Working Areas
- copies of their daily time cards
- cost allocation
- payroll registers
- Schedule of Equipment and time sheets, and
- Any other information the delegated *Project Manager* reasonably requires.

2.6 Training workshops and technology transfer

Duvha Power Station will from time-to-time schedule Plant Safety Regulations training; it is responsibility of the *Contractor* to book his personnel for the training.

2.7 Things provided at the end of the *service period* for the *Employer*'s use

2.7.1 Information and other things

All records, data books, inspection reports, QCPs etc relating to the *Works.*

2.8 Management of work done by Task Order

The *Service Manager* issues a Task Order to the *Contractor* which specifies clearly the work, services, equipment and material to be provided, additional specifications and procedures and any other constraints the *Contractor* complies with in providing the Works. The Task Order is issued before the *Contractor* Provides the Work.

The *Service Manager* issues Task Order*s* to the *Contractor* in a timely manner that allows the *Contractor* to properly plan the work within the time periods stated on the *Task Order.*

The *Service Manager* issues to the *Contractor* any information relative to the *Employer's* need and circumstance surrounding forecast future work required from the *Contractor*. This information allows the *Contractor* to provide staff in a cost effective and efficient manner.

Emergency *work*

The *Contractor* may required to undertake emergent work and even after normal working hours, and work instruction will be detailed on the work order print out papers.

The *Service Manager* may issue a verbal instruction to the *Contractor* to undertake emergency work. This verbal instruction is confirmed in writing within 5 days from when the instruction is issued.

3. Health and safety, the environment and quality assurance

3.1 Health and safety risk management

The service requires that the Contractor must have at least two employees preferably the Supervisors to be trained, competence-assessed, and authorized in writing to perform the duties of a Responsible Person in terms of the Eskom Plant Safety Regulations. The *Employer* will offer Plant Safety Regulations free of charge to the *Contractor* employees depending on the availability of PSR training schedule.

While work is in progress, adequate warning signs and/or barricades shall be used in all areas where there is a risk of persons being injured by materials or equipment falling from the work area. Barricades should be continuous and easily visible.

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 *Service Manager* before any activities can be started on site.

a) The *Contractor* complies with the requirements of the Duvha Power Station Safety, Health & Environmental Specifications SAS 0012: Duvha Power Station Contractors safety manual.
b) The documents are completed by the Contractor's and submitted to the Employer before taking possession of the works.
c) These documents are valid for the duration of the works.
d) The *Contractor* and all his personnel attend a Health and Safety Induction Course prior to starting with the works.
e) The induction course is presented by the Safety Risk Department at Duvha Power Station.
f) The *Contractor* makes arrangements with Safety Risk Management at telephone number 013-690-0143 or 013 690 0505.
g) 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.
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 work.
v) Proof of authorisation/accreditation from Department of Employment and 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.

3.2 Environmental constraints and management

- The *Contractor* shall comply with the environmental criteria and constraints stated in Annexure ENVP 0016: Procedure for environmental handling of waste including redundant and obsolete equipment.
- Refuse Disposal
- The *Employer* will provide special colour coded bins for refuse disposal. The *Employer* will empty these bins.
- 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
- 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.

3.3 Quality assurance requirements

- All work is carried out under the supervision of an experienced supervisor.
- The *Contractor* complies with the Employer's Quality Requirements as specified in Eskom Generation Standard 240-105658000 QM58 Rev2. Annexure B to the Supplier Quality Management: Specification indicates the specific application thereof. All quality control documentation is submitted to the *Service Manager* within 7 days of *works* start date.
- Proposed QCP template will be provided to *Contractor* after the awarding of the contract.

4. Procurement

4.1 Plant and Materials

4.1.1 Specifications

The *Contractor to* ensure that the work be performed in accordance to the latest statutory regulations, corporate standards and regulations, SANS and international (where applicable) design standards as well as all associated standards and regulations. This includes but is not limited to the following:

Statutory Design Standards:

- SANS 10162 –The Structural Use of Steelwork
- SANS 10100 – The Structural use of Concrete
- SANS 1200 Part A-MM - Standardised Specification for Civil Engineering Construction
- SANS 10400 - Application of the National Building Regulations
- BS 2853 – Design and Testing of Overhead Runway Beams
- SANS 369 / BS 7273 – Code of Practice for the Operation of Fire protection Measures.
- SANS 2001 – Part BS1 to EM1 : Construction work
- SANS 55392 : Sustainability in building construction - General principles
- SANS 2001 CC2 Construction works: Part CC2: Concrete works (minor works)

Statutory Safety Regulations:

- Occupational Health and Safety Act, Act 85 of 1993 and its Regulations
- SANS 085 - The Design, Erection, Use and Inspection of Access Scaffolding

Corporate Standards and Regulations:

- SAS 0012 - Duvha Power Station Contractors safety manual
- 240-105658000 QM58 Rev3 - Supplier Quality Management: Specification
- ENVP0005 - Duvha Power Station Waste Management procedure

- RMP0001 - Risk and Impact Assessment – Duvha Power Station.
- SAP0006 - Work in Confined Spaces
- ENP 0002 - Modification Control Process
- 36-1126 - Specification for Corrosion Protection of Plant and Equipment with Coatings
- 240-43156827 - Introduction to the welding rule book
- 36-505 - Personnel and entities performing welding related special processes on Eskom plant
- 32-418 - Eskom Work at Height Standard
- ISO 9001 Quality Management Systems
- 32-727 - Eskom Safety, Health, Environment and Quality (SHEQ) Policy

4.1.2 Correction of defects

- The *Contractor* shall take not more seven (7) days to correct the defect after has been notified by the *Service Manager* or his or her representative.
- The Contractor shall not repair an item defect emanates from newly installed substandard quality material but rather replace by a new one.
- The *Contractor* will do an item repair on defects due to poor installation or sub-standard work.

4.1.3 Tests and inspections before delivery

- If required, the *Contractor* must conduct material tests and the *Employer* will send representatives to witness tests in line with QCP.
- The *Contractor* submits material test certificates to the *Service Manager* for acceptance.

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

a) The *Employer* will provide power supply, water and land for the storage of equipment.
b) The *Contractor shall* supply all the necessary equipment and material required to execute the *Works*.
c) Should the *Contractor* need to use of any of the *Employer’s* Equipment, including compressed air, electricity, water supply and crane, it must be specified by the *Contractor.* The *Employer* does not guarantee continuity of supply of any of these items.

5. Working on the Affected Property

5.1 *Employer*'s site entry and security control, permits, and site regulations

a) The contractor applies for access permits for all works exceeding four (4) weeks via the *Service 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 of 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 always in possession of a Contractor's Permit 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 to return the permits will result in a R40,00 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 that are in force at Duvha Power Station.
n) Application forms for visitors are filled in by the *Contractor's* Site Manager and approved by the *Service 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 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 *Service 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 Security 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* needs to submit security clearance for his employees to Duvha Power Station Security services Department before sending the request of attending the safety induction.

5.2 People restrictions, hours of work, conduct and records

- The *Contractor* is restricted to the site. The *Contractor* is forbidden to enter any other areas except the area they will be working at and ensures that his employees abide by these regulations.
- *Contractor* employees must sign first a Limited Access Register (LAR) at Unit Control Room before going to the working area.
- The *Contractor* personnel to work the same working hours as *Eskom* personnel to allow the *Service Manager* or her/his representative to oversee the works: from Mondays to Thursday's between 7:00am – 16:15pm, and on Fridays between 07:00am – 12:00am. In case of emergency a call-out will be made after working hours but the *Service Manager* needs to approve for such work arrangement.
- The *Contractor* shall keep records of attendance registers of all his employees and subcontractor/s on site on monthly basis, copies of records shall be submitted to the *Service Manager* for assessment.

5.3 Health and safety facilities on the Affected Property

- The *Contractor* shall comply with the health and safety requirements contained in SAS0012: Duvha Power Station Contractors safety manual (latest revision obtainable from the *Service Manager*.
- SHE project documents are compiled and completed by the *Contractor* and submitted to the *Employer* before taking possession of the works.
- SHE file documents are valid for the duration of the works.
- The *Contractor* and all his personnel attend a Health and Safety Induction Course prior to starting with the *works*.
- The induction course is presented by the Safety Risk Department at Duvha Power Station.
- The *Contractor* makes arrangements with Safety Risk Management at telephone number 013-690-0143.
- 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.
- Training and Competency Records with regard to the skills he uses to carry out the *works* or any other works in the *Employers* premises.
- Compensation Commissioner record and proof of registration shall be submitted.
- 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.
- Personal Protective Equipment and Safety Equipment Inspection, training and competency records and documentation.
- Employment contracts for all sub-contractor or labour-only contracts.
- Compliance to a Safety System, such as NOSA or any other system that is similar in nature.
- Records of all incidents or accidents, and vehicle accidents, incurred during execution of this *works* or any other works in the *Employers* premises.
- Records of all man-hours, including sub-contractors or labour-only contracts, the *Contractor* spends on the *Employers* premises.
- Written Safe Work Procedures for all hazardous tasks the *Contractor* executes on the *Employers* premises.
- A Fall Protection Plan for all elevated work the *Contractor* does on the *Employers* premises.
- Environmental Plan and awareness training.
- Induction training records of his staff by himself/herself.
- Minimum wage compliance for the different skills and to which Bargaining Council compliance is made to and proof of membership, if any.

- Risk Assessment of this type of works
- Proof of authorisation/accreditation from Department of Labour and or other Statutory Body for this type of works, if applicable.
- Emergency Evacuation and Rescue Plan for the hazardous tasks related to the works.
- 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 on site located next to Unit 2 Front Side 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.

5.4 Records of *Contractor*'s Equipment

- In case the *Contractor* brings his own Equipment to site, the *Employer* will need to have SANS specified inspections and safety certificates of Equipment before use on site.
- The *Contractor* keeps accurate records of Equipment and these records are open to audit. All documentation is kept by the *Contractor* for a period of three years following Completion of this contract.

5.5 Equipment provided by the *Employer*

- The *Employer* allows the *Contractor* to use Overhead Cranes and Hoists, provided the *Contractor's* employees are authorised Lifting Machine operators.
- The *Employer* provides scaffolding, the request shall be made on time through the *Service Manager* or his/ her representative.
- Should the *Contractor* require using any of the *Employer's* Equipment, including compressed air, electricity, water supply and crane, it must be specified by the *Contractor* during the kick off meeting. The *Employer* does not guarantee continuity of supply of any of Equipment.
- 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.
- 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.
- The *Contractor* Site Manager must ensure that any one of his employees or Sub-*Contractor*, operating hoist equipment belonging to the *Employer,* is authorised by an Accredited Company and retraining is done annually. Arrangements for training courses

can be made via Duvha Power Station Maintenance Training but the *Contractor* will absorb costs.

- A copy of this accredited and valid training certificate must be given to the *Employer's Supervisor*, who will then arrange access for usage.

5.6 Site services and facilities

5.6.1 Provided by the *Employer*

a) Potable Water Supply
   - Potable water is available at the existing points. The *Contractor* provides his own water pipes and fittings from the supply water point to their offices.

b) Electrical Power Supply
   - Power is available at the existing points.
   - 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.
   - All *Contractors'* Electrical Distribution Boards are earthed to the steel structure of the plant.

c) Toilet Facilities
   - The *Employe*r has existing ablution facilities on the plant but their availability is not guaranteed hence it is advisable that the *Contractor* provides ablution facilities for its personnel.

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 provided they are making orders on time.

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.*

5.6.2 Provided by the *Contractor*

- The *Contractor* provides sites offices, VIP ablution facilities and dining area facilities as required for use by the *Contractor* employees once on site and all other facilities they deem necessary in executing the work as quoted for in the site establishment and de-establishment costs.
- ***Potable electrical distribution board***
  - ❖ The *Contractor* provides his own potable 380V electrical distribution boards, and supply cables to and from the boards, for all his power supply requirements to execute the *works*.
  - ❖ *Contractors*' Electrical Distribution Boards complies with the 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 electrician.
  - ❖ 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
- The *Contractor* provides transport for material and people to site.
- Upon completion of the contract, the *Contractor* must take out and remove all facilities, electrical distribution board, pipes and cables she/he brought on site. The site must be rehabilitated and brought back into it original state.

5.7 Control of noise, dust, water and waste

- The *Contractor* shall take all responsible measures to minimise any dust nuisance, pollution of stream and inconvenience to or interference with public as a result of the execution of the works.
- The *Contractor* must put safety signs and barricade the working area to prevent people coming near the working area to minimise exposure to noise and dust.
- The *Contractor* shall remove all rubble and dispose it to the allocated waste bins as according Duvha Waste Management Procedure (EVP0005).

5.8 Hook ups to existing works

- The *Contractor* must have expertise and experience in civil maintenance in order to work on or around existing works.
- There are existing buildings, structures, and plant on site that the *Contractor* will be working at or around.

- The working area has plant components that are installed on the floor, roof ceiling, cable tunnel area and side walls or columns which make the access to certain areas restricted.
- The *Contractor* shall take into consideration other plant systems or components that are present and pose obstructions to the works required. Not all obstructions can be removed completely in-order to gain free movement in the working space.
- The *Contractor* must make ways and finds method to work around safely while the plant is in operation.

5.9 Tests and inspections

5.9.1 Description of tests and inspections

- The *Contractor* shall perform concrete cube tests, compaction material strength tests CCTV pipeline (sewage and drainage pipe systems) inspections according to SANS standards.
- The *Contactor* shall conduct performance tests after installation in the presence of the *Service Manager* or his/her representative and other stakeholders in line with QCP, and functional requirements.
- All work must be inspected and approved by the *Engineer* and *Service Manager* before it may be deemed as complete.
- The *Contractor* shall provide and submit to the *Service Manager* for acceptance the certificate/s of compliance for all tests and inspections done in line with QCP.

5.9.2 Materials facilities and samples for tests and inspections

The *Contractor* must conduct material tests in a reputable and SANAS accredited workshop facility and the *Employer* will send representatives to witness tests in line with QCP. It important for the *Contractor* to submit material certificates to the *Service Manager* for acceptance prior material is delivered to site.

List of drawings

6.1 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.

Drawing number	Revision	Title
057/ 29912		Station Drain layout system
057/ 6122		General layout
057/ 15314		General layout
057 / 251		General layout with services

Note: Additional Drawings for plant specifics will be provided when required; this is subject to the availability of the drawings on Eskom's drawings documentation storage systems

APPENDIX A

Minimum tools required per skill:

Bricklaying	Carpentry	Plumber	Painter	Tiler	Boilermaker
-Grinders -4lb hammers - Chisels -Spirit level -Various trowels Building Square -Spades -Shovels -Plastering trowels -Brushes -100m and 10m tape measures -Wheel barrows -Steel fix pliers -Pick -Step ladder 12 steps -Hand saw -Steel saw -Brick bolster -String line -Bricklayer's pins -Bucket/s -Broom/s -Corner blocks -Mortar board -Rubber hummer (mallet) -Rake -Builder's pencil -Chalk liner -Carpentry hammer	-Crowbar - Pliers -Shifting spanners -Chalk liner -Monkey wrench -Carpenter hammer -Combination squares -Wood chisel -All size screw drivers -Spirit Level -10m and 5m tape measures -Mallet hammer -Filer -Crosscut saw -Tenon saw -Trowel -Scraper -Brushes -Cable knife -Nail bag -Grinder -Jig saw -Circular saw -Hole saw -Pop riveting gun -Set metric allen keys -Carpenter's pencil -Nail puller -Tin snips -Rivet Guns -Stepladder 10 steps -Glass cutter	-Shifting spanners -Pipe wrench (small, medium, large) -Vice grab -Chisels -4lb hammer -Hack saw -Pliers -Long nose pliers -Screw drives -Pipe cutter -Plunger -Locking & slip joint pliers -Blow lamp and gas -Pipe bender -Hack saws -Spirit level - Set allen keys -Drain rods and accessories -Soldering pad -Long nosed pliers -Stop cock key -Knee pads - Stanley knife -File set -Set of spanners -Torch/head lamps -Basin spanner -Buckets -Stepladder 8 steps -Monkey wrench	-Step ladder -Roller extension rods -Paint trays -Various Brushes -Paint cleaning chemicals -Masking tapes -Sandpapers -Paint Scraper -Paint edger -Sponges -Chalk liner -Tape measure 5m and 10m -Wire Brushes -Power Mixers -Sealant Guns -Adhesive Trowel -Staple Gun -Pressure Sprayers -Grinder &Scrapping blades -Polyurethane Gauge -Scissors -Notched trowel	-Tile cutter -Trowel -10m and 5m Tape measurers -Spirit level -Steel Float -Wooden Float -Spades and Shovels -Tile Chisels -Sponge blocks -Knee Pads -Concrete Straight Edge Tool 1.8m -Concrete Straight Edge Tool 3.0m -Crowbar -Rubber hummer -Rulers: 5m & 6.5m & 3m T-square -Corner square -Grout Applicator Squeegee -Paint Brush -Grout Removal Tool -Tile cutter plier -Mosaic tile cutter -Tilers pencil	-Cutting torch with gas bottles -Grinder -Portable welding machine -Chipping hammer -Trammel -Chalk liner -4lb Hammer -Tin snip -Centre punch -Scriber -Tape measure 5m -Paint brush -Steel rule 100, 300 & 600 mm -Folding rule 600mm -Carpenter squares 100 & 300 mm -Hacksaw -Safety glasses (wrap around) -Gas lighter -Nozzle cleaner -Spindle key -G-clamps -Files -Dividers -150mm Outside calliper

Tools/Equipment for site use:

Equipment	Quantity
Vernier	1
Cordless drill	Minimum 3
Power tools	One each
Water pump (petrol or diesel) & hoses	2
Wall breaker	2
Concrete drill	3
Jack hammer (small)	1
Jack hammer (large)	1
Drain cleaning rods	4 sets to reach 100m length (heavy duty)
Barricading cones	Adequate for site use
Men at work signs	Adequate for site use
Solid barricades	Adequate for site use
Safety Harnesses	Per person
Welder's steel workbench including vices (pipe and bench)	1

Appendix B

Consumables per month

Consumable	Monthly quantity
Cleaning solvents	8 litres
Paraffin	5 litres
Petrol/diesel for the water pump	30 litres
Oil rags	2 bags
Nails	10 kg
Thinners	4 litres
Paint brushes	8
Drain cleaner	10 litres
Nails	300
Screws	300
Pop riverts	300
Fischer plugs	300
Welding rods	8
Welding screens	4
Cutting gases	1
Cutting torch nozzles	1