NEC3 Engineering & Construction Contract

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

and

For **Installation of Cleaning Downpipes at Kusile Power Station for a Period of 12 Months**

Contents: **No of pages**

CONTRACT No.

Part C1: Agreements & Contract Data

Contents: **No of pages**

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:

Installation of Cleaning Downpipes at Kusile Power Station for a Period of 12 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 B	The offered total of the Prices exclusive of VAT is	**R**
	Sub total	**R**
	Value Added Tax @ 15% is	**R**
	The offered total of the amount due inclusive of VAT is[1]	**R**
	(in words)	

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

Signature(s) .....

Name(s) .....

Capacity .....

For the tenderer:

.....
(Insert name and address of organisation)

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

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

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

Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

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

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

Signature(s) .....

Name(s) .....

Capacity .....

for the Employer

.....
(Insert name and address of organisation)

Name & signature of witness .....

Date .....

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

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

Note:

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

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

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

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

	For the tenderer:	**For the Employer**
Signature	.....	.....
Name	.....	.....
Capacity	.....	.....
On behalf of	..... *(Insert name and address of organisation)*	..... *(Insert name and address of organisation)*
Name & signature of witness	.....	.....
Date	.....	.....

C1.2 ECC3 Contract Data

Part one - Data provided by the *Employer*

[Instructions to the contract compiler: (delete these two notes in the final draft of a contract)

1. Please read the relevant clauses in the conditions of contract before you enter data. 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.

1. Some ECC3 options are always selected by Eskom Holdings SOC Ltd. The remaining ECC3 options are identified by shading in the left hand column. In the event that the option is not required select and delete the whole row. Where the following symbol is used "**[●]" -** data is required to be inserted relevant to the specific option selected.]

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

Clause	Statement	Data
1	**General**	
	The *conditions of contract* are the core clauses and the clauses for main Option	
		B: Priced contract with bill of quantities
		W1: Dispute resolution procedure
	dispute resolution Option	
	and secondary Options	
		X2 Changes in the law
		X5: Sectional Completion
		X7: Delay damages
		X15: Limitation of *Contractor's* liability for design to reasonable skill and care
		X16: Retention
		X 18: Limitation of liability
		Z: Additional conditions of contract
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The *Employer* is (Name):	**Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company**

		incorporated in terms of the company laws of the Republic of South Africa
	Address	**Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg**
10.1	The *Project Manager* is: (Name)	**Zanele Kubheka**
	Address	**Kusile Power Station, R545 Balmoral/Kendal Road, Haartebeesfontein Farm, Witbank**
	Tel	**013 699 7838**
	Fax	**N/A**
	e-mail	**KubhekZa@eskom.co.za**
10.1	The *Supervisor* is: (Name)	**Zintle Moloto**
	Address	**Kusile Power Station, R545 Balmoral/Kendal Road, Haartebeesfontein Farm, Witbank**
	Tel No.	**014 763 8654**
	Fax No.	**N/A**
	e-mail	**JackZ@eskom.co.za**
11.2(13)	The *works* are	**Installation of cleaning down pipe**
11.2(14)	The following matters will be included in the Risk Register	**1. Dust Inhalation 2. Slip, Trip & Fall 3. Falling Objects 4. Electric Shock 5. Permit to Work 6. Working at heights 7. Quality 8. Time**
11.2(15)	The *boundaries of the site* are	**• Horizontal duct section (k1-k6) • Top of day bins (day-bin 1-3) • Top of silo 1&2 • Top of ash silos (silo 1-6)**
11.2(16)	The Site Information is in	**Part 4: Site Information**
11.2(19)	The Works Information is in	**Part 3: Scope of Work and all documents and drawings to which it makes reference.**
12.2	The *law of the contract* is the law of	**the Republic of South Africa**
13.1	The *language of this contract* is	**English**
13.3	The *period for reply* is	**3 days**
2	**The *Contractor's* main responsibilities**	**Data required by this section of the core clauses is provided by the *Contractor* in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.**

3 Time

11.2(3)	The *completion date* for the whole of the *works* is	**After commissioning of each section, all permits to site has been cleared and proper handover is done to the end user**		
11.2(9)	The *key date*s and the *condition*s to be met are:	***Condition* to be met**		***key date***
		1	**Submit Programme for approval**	**2 Weeks after Kick off meeting**
		2	**Submit QCP's**	**2 weeks after Kick off meeting**
		3	**Submit safety file for approval**	**2 Weeks after kick off meeting**
			All tools & equipment to be used to be readily available and inspected	**As soon as safety file is approved**
30.1	The *access dates* are:	**Part of the Site**		**Date**
		1	**Kick Off Meeting**	**1 week after Contract Award via teams – The contractor will have access to site after Safety file approval**
		2	**Kusile Admin Building**	**After Safety File Approval**
		3	**Installation of Cleaning Downpipes at Horizontal duct section (k1-k6), Top of day bins (day-bin 1-3), Top of silo 1&2, Top of ash silos (silo 1-6)**	**5 Days after Site Establishment and Permit to work approval**
31.1	The *Contractor* is to submit a first programme for acceptance within	**2 Weeks after the Kick off meeting**		
31.2	The *starting date* is	**Contract signature date**		
32.2	The *Contractor* submits revised programmes at intervals no longer than	**3 Months**		
35.1	The *Employer* is not willing to take over the *works* before the Completion Date.	**The takeover will be after the completion of each section**		

4	**Testing and Defects**	
42.2	The *defects date* is	**52 weeks after Completion of the whole of the *works*.**
43.2	The *defect correction period* is	**10 days After the Contractor being notified**
5	**Payment**	
50.1	The *assessment interval* is	**On the 25th 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	**4 weeks.**
51.4	The *interest rate* is	**the publicly quoted prime rate of interest (calculated on a 365 day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and** **(ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted *mutatis mutandis* every 6 months thereafter and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.**
6	**Compensation events**	
60.1(13)	The place where weather is to be recorded is:	**Kusile Power Station**
	The *weather measurements* to be recorded for each calendar month are,	**the cumulative rainfall (mm)** **the number of days with rainfall more than 10 mm** **the number of days with minimum air temperature less than 0 degrees Celsius** **the number of days with snow lying at 09:00**

		hours South African Time **and these measurements:**
	The *weather measurements* are supplied by	
	The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at:	
	and which are available from:	**the South African Weather Bureau and included in Annexure A to this Contract Data provided by the *Employer***
60.1(13)	Assumed values for the ten year return *weather data* for each *weather measurement* for each calendar month are:	**N/A**
7	**Title**	
8	**Risks and insurance**	
80.1	These are additional *Employer*'s risks	**Late design approval, late equipment supply, and commencement of the works.**
9	**Termination**	
10	**Data for main Option clause**	
B	**Priced contract with bill of quantities**	
11	**Data for Option W1**	
W1.1	The *Adjudicator* is	**the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).**
	Address	**[●]**
	Tel No.	**[●]**
	Fax No.	**[●]**
	e-mail	**[●]**
W1.2(3)	The *Adjudicator nominating body* is:	**the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See www.ice-sa.org.za) or its successor body.**
W1.4(2)	The *tribunal* is:	**arbitration.**
W1.4(5)	The *arbitration procedure* is	**the latest edition of Rules for the Conduct of**

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

12 Data for secondary Option clauses

X2 Changes in the law

X5 Sectional Completion

X5.1 The *completion date* for each *section* of the *works* is:

Section	**Description**	***Completion date***
1	**Project Execution, of Horizontal duct section (k1-k6)**	**30 June 2025**
	Project Execution, of Top of day bins (day-bin 1-3)	**28 Sep 2025**
	Project Execution, of Top of silo 1&2	**22 Dec 2025**
	Project Execution, of Top of ash silos (silo 1-6)	**31 Mar 2026**

X5 & X7 Sectional Completion and delay damages used together

X7.1 X5.1 Delay damages for late Completion of the *section*s of the *works* are:

section	**Description**	**Amount per day**

X7.1 X5.1 Delay damages for late Completion of the *section*s of the *works* are:

section	**Description**	**Amount per day**
1	**Project Execution, Commissioning & Hand Over of Horizontal duct section (k1-k6)**	**1% of Total Prices per day to a maximum of 20% a month**
	Project Execution, Commissioning & Hand Over of Top	**1% of Total Prices per day to a maximum of 20% a month**

		of day bins (day-bin 1-3)	**1% of Total Prices per day to a maximum of 20% a month**
		Project Execution, Commissioning & Hand Over of Top of silo 1&2	**1% of Total Prices per day to a maximum of 20% a month**
		Project Execution, Commissioning & Hand Over of Top of ash silos (silo 1-6)	
	Remainder of the *works*		
	The total delay damages payable by the *Contractor* does not exceed:	**10% of the Total Prices**	
X15	**Limitation of the *Contractor*'s liability for his design to reasonable skill & care**		
X16	**Retention (not used with Option F)**		
X16.1	The *retention free amount* is	**R0**	
	The *retention percentage* is	**5% for every assessment**	
X18	**Limitation of liability**		
X18.1	The *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to:	**The Contractor's total liability for any damaged caused to the Employer's property, equipment, material, and plant shall be limited to a Purchase Order issued by the Employer as of the Purchase Order date and shall be capped at 25% of the damages caused per incident or to a deductible value of R500 000.00 whichever is the lesser.)**	
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 Contractor's total liability for any damaged caused to the Employer's property, equipment, material, and plant shall be limited to a Purchase Order issued by the Employer as of the Purchase Order date and shall be capped at 25% of the damages caused per incident or to a deductible value of R500 000.00 whichever is the lesser.)**	
X18.3	The *Contractor*'s liability for Defects due to his design which are not listed on the Defects Certificate is limited to	**The greater of the total of the Prices at the Contract Date and the amounts excluded and unrecoverable from the Employer's assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus the applicable deductible as at contract date.**	

X18.4	The *Contractor*'s total liability to the *Employer* for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	**the total of the Prices other than for the additional excluded matters.** **The *Contractor's* total liability for the additional excluded matters is not limited.** **The additional excluded matters are amounts for which the *Contractor* is liable under this contract for** • **Defects due to his design which arise before the Defects Certificate is issued,** • **Defects due to manufacture and fabrication outside the Site,** • **loss of or damage to property (other than the *works*, Plant and Materials),** • **death of or injury to a person and** • **infringement of an intellectual property right.**
X18.5	The *end of liability date* is	**(i) 5 years after the *defects date* for latent Defects and** **(ii) the date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter.** **A latent Defect is a Defect which would not have been discovered on reasonable inspection by the *Employer* or the *Supervisor* before the *defects date*, without requiring any inspection not ordinarily carried out by the *Employer* or the *Supervisor* during that period. If the *Employer* or the *Supervisor* do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the *Employer* or the *Supervisor* to have discovered the Defect.**
Z	**The *Additional conditions of contract* are**	**Z1 to Z15 always apply.**

Z1 Cession delegation and assignment

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

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

Z2 Joint ventures

Z2.1 If the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations then these persons or organisations are deemed to be jointly

and severally liable to the *Employer* for the performance of this contract.

Z2.2 Unless already notified to the *Employer*, the persons or organisations notify the *Project Manager* within two weeks of the Contract Date of the key person who has the authority to bind the *Contractor* on their behalf.

Z2.3 The *Contractor* does not alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the *Employer* having been given to the *Contractor* in writing.

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

Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor*'s B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.

Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Project Manager* within thirty days of the notification or as otherwise instructed by the *Project Manager*.

Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor*'s obligation to Provide the Works.

Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are P1, P2 and P3 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

Z4 Confidentiality

Z4.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.

Z4.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Project Manager*.

Z4.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.

Z4.4 The taking of images (whether photographs, video footage or otherwise) of the *works* or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Project Manager*. All rights in and to all such images vests exclusively in the *Employer*.

Z4.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

Z5 Waiver and estoppel: Add to core clause 12.3:

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

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

Z6.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *works*. Without limitation the *Contractor*:

- accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Site;
- warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of *works*; and
- undertakes, in and about the execution of the *works*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

Z6.2 The *Contractor*, in and about the execution of the *works*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

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

Z7.1 Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer*'s procedures stated in the Works Information, showing the amount due for payment equal to that stated in the payment certificate.

Z7.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.

Z7.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer*'s VAT number 4740101508 on each invoice he submits for payment.

Z8 Notifying compensation events

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

Z9 *Employer's* limitation of liability

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

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

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

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

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

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

Z12 Ethics

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

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

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

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

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

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

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

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

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

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

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

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

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

Z13 Insurance

Z 13.1 Replace core clause 84 with the following:

Insurance cover 84

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

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

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

INSURANCE TABLE A

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

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

INSURANCE TABLE B

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

Z14 Nuclear Liability

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

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

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

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

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

Z15 Asbestos

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

AAIA means approved asbestos inspection authority.

ACM means asbestos containing materials.

AL means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.

Ambient Air means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.

Compliance Monitoring means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

OEL means occupational exposure limit.

Parallel Measurements means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.

Safe Levels means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

Standard means the *Employer*'s Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.

SANAS means the South African National Accreditation System.

TWA means the average exposure, within a given workplace, to airborne asbestos fibres, normalised to the baseline of a 4 hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.

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

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

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

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

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

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

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

C1.2 Contract Data

Part two - Data provided by the *Contractor*

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

Notes to a tendering contractor:

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

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

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

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

		CV's (and further key persons data including CVs) are appended to Tender Schedule entitled .		
11.2(3)	The *completion date* for the whole of the *works* is			
11.2(14)	The following matters will be included in the Risk Register			
11.2(19)	The Works Information for the *Contractor*'s design is in:			
31.1	The programme identified in the Contract Data is			
B	**Priced contract with bill of quantities**			
11.2(21) 11.2(31)	The *bill of quantities* is in The tendered total of the Prices is	**(in figures)** **(in words), excluding VAT**		
B	**Priced contract with bill of quantities**	**Data for the Shorter Schedule of Cost Components**		
41 in SSCC	The percentage for people overheads is:	**%**		
21 in SSCC	The published list of Equipment is the last edition of the list published by The percentage for adjustment for Equipment in the published list is	**Minus %**		
22 in SSCC	The rates of other Equipment are:	**Equipment**	**Size or capacity**	**Rate**
61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are **Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates.** **Please insert another schedule if foreign resources may also be used**	**Category of employee**	**Hourly rate**	
62 in SSCC	The percentage for design overheads is	**%**		

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

PART 2: PRICING DATA
ECC3 Option B

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

C2.1 Pricing assumptions: Option B

1. How work is priced and assessed for payment

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

Identified and defined terms 11 11.2

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

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

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

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

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

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

2. Function of the Bill of Quantities

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

3. Guidance before pricing and measuring

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

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

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

plus Fee is used.

4. Measurement and payment

4.1. Symbols

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

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

4.2. General assumptions

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

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

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

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

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

4.3. Departures from the *method of measurement*

4.3.1.

4.4. Amplification of or assumptions about measurement items

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

C2.2 the *bill of quantities*

Item No.	Description	Unit	Quantity	Rate	Amount
	ITEM 1				
1	**PRELIMINARIES AND GENERAL**				
	-				
1.1	Safety File	Each	1		
1.2	PPE (x5 No. Personnel)	Each	25		
1.3	Entry Medicals (x5 No. Personnel)	Each	25		
1.4	Exit Medicals (x5 No. Personnel)	Each	5		
1.5	Security Clearance Certification (x5 No. Personnel)	Each	25		
1.6	Travelling	Km	48600		
	Sub-total Item 1 (Preliminaries and General) carried to Summary				
	ITEM 2				
2	**CREW**				
	-				
2.1	**Annual inspections (including dam safety inspections, slope stability assessment and reports)**				
	-				
2.1.1	1 X Approved Professional Person (APP) Civil Engineer (Experience 5+ years) (1 No for 5 years)				
2.1.1.1	Evaluation of Report	Hours	10		
2.1.2	1 X Civil Engineer (Experience 2+ years) (1 No for 5 years)				
2.1.2.1	Pollution Control Dams (PCD) x 3 No.	Hours	60		
2.1.2.2	Settling Ponds x 2 No.	Hours	20		
2.1.2.3	Raw Water Reservoir (RWR) x 1 No.	Hours	20		
2.1.2.4	Compiling Report	Hours	200		
2.1.3	1 X Civil Technician (Experience 2+ years)				
2.1.2.1	Pollution Control Dams (PCD) x 3 No.	Hours	60		
2.1.2.2	Settling Ponds x 2 No.	Hours	20		
2.1.2.3	Raw Water Reservoir (RWR) x 1 No.	Hours	20		
2.2	**Bathymetric survey (Semiannual)**				
	-				
2.2.1	1 X Professional Surveyor (Experience 2+ years)				
2.2.1.1	Pollution Control Dams (PCD) x 3 No.	Hours	120		
2.2.1.2	Raw Water Reservoir (RWR) x 1 No.	Hours	40		
2.2.1.3	Compiling Report	Hours	400		
2.2.2	1 X Survey Technician (Experience 2+ years)				
2.2.2.1	Pollution Control Dams (PCD) x 3 No.	Hours	120		
2.2.2.2	Raw Water Reservoir (RWR) x 1 No.	Hours	40		
2.3	**As and when required tasks**				

2.3.1	1 X Approved Professional Person (APP) Civil Engineer (Experience 5+ years) (1 No for 5 years)				
2.3.1.1	Monthly meetings and review meeting minutes for critical technical decisions (Monthly)	Hours	60		
2.3.1.2	Assess water balance predictions and provide recommendations (Yearly)	Hours	40		
2.3.1.3	Identify any areas of risk with Engineering reports, drawings, works information, bill of quantities and budget quotes (Quarterly)	Hours	20		
2.3.1.4	Attend all dam related meetings and audits (Monthly)	Hours	60		
2.3.1.5	Provide ad-hoc Engineering advice on Civil Engineering related issues (Quarterly)	Hours	20		
2.3.2	1 X Civil Engineer (Experience 2+ years) (1 No for 5 years)				
2.3.2.1	Monthly meetings and review meeting minutes for critical technical decisions (Monthly)	Hours	120		
2.3.2.2	Assess water balance predictions and provide recommendations (Yearly)	Hours	200		
2.3.2.3	Identify any areas of risk with Engineering reports, drawings, works information, bill of quantities and budget quotes (Quarterly)	Hours	40		
2.3.2.4	Attend all dam related meetings and audits (Monthly)	Hours	120		
2.3.2.5	Provide ad-hoc Engineering advice on Civil Engineering related issues (Quarterly)	Hours	40		
	Sub-total Item 2 (Crew) carried to Summary				
	ITEM 3				
3	**EQUIPMENT**				
3.1	**Annual inspections (including dam safety inspections, slope stability assessment and reports)**				
3.1.1	Camera				
3.1.1.1	Pollution Control Dams (PCD) x 3 No.	Hours	60		
3.1.1.2	Settling Ponds x 2 No.	Hours	20		
3.1.1.3	Raw Water Reservoir (RWR) x 1 No.	Hours	20		
3.2	**Bathymetric survey (Semiannual)**				
3.2.1	GNSS base and Rover RTK positioning system (with associated software)				
	Pollution Control Dams (PCD) x 3 No.	Hours	120		
	Raw Water Reservoir (RWR) x 1 No.	Hours	40		
3.2.2	Dual frequency single beam echosounder				
	Pollution Control Dams (PCD) x 3 No.	Hours	120		
	Raw Water Reservoir (RWR) x 1 No.	Hours	40		
3.2.3	Terrestrial Laser Scanner (with associated software)				
	Pollution Control Dams (PCD) x 3 No.	Hours	120		
	Raw Water Reservoir (RWR) x 1 No.	Hours	40		
	Sub-total Item 3 (Equipment) carried to Summary				
	FINAL SUMMARY				

ITEM 1	PRELIMINARIES & GENERAL				
ITEM 2	CREW				
ITEM 3	EQUIPMENT				
				Final Summary Total	

PART 3: SCOPE OF WORK

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

C3.1: EMPLOYER'S WORKS INFORMATION

Contents

When the document is complete, insert a 'Table of Contents'. To do this go to: Insert, → Reference, → Index and tables → Table of Contents. Three levels and the title (but not the subtitle) may be shown if the formats used in this template are retained.

1 Description of the *works*

2.1 Scope

2.1.1 Purpose

The purpose of this document is to provide a clear statement of the stakeholder's design requirements for the System or problem. This document defines both deliverables and design requirements, which shall be met by the design effort. This document collects all the design related stakeholder requirements for the project and forms the basis of the design.
This SRD is developed to fulfil the following purposes:

- To provide a basis for acceptance of the design and development of the system by Eskom, Kusile Power Station.
- To provide a basis for the contract to supply the system.
- To provide a basis for satisfying regulatory and licensing requirements for the system; and
- To establish a sound basis for a comprehensive qualification, validation and proving programme.

2.1.2 Applicability

This document applies to Kusile Power Station only.

2.1.3 Effective date

This document will be effective from the date of its authorisation.

2.2 Normative/Informative References

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

2.2.1 Normative

[1] 240-58554739: Requirements Management Guideline
[2] ISO 9001 Quality Management Systems.
[3] 240-44509520 Process Control Manual (PCM) for Define Requirements.
[4] 240-46953552 Process Control Manual (PCM) for Plan Technical Effort.
[5] 240-49910693 Stakeholder Requirements Definition Template.
[6] 240-46977030 Process Control Manual (PCM) for Manage Requirements.
[7] 240-53113685 Design Review Procedure.
[8] 240-53114026 Project Engineering Change Procedure.
[9] 240-53114002 Engineering Change Management Procedure
[10] 240-43898151 Perform Verification and Validation PCM

2.2.2 Informative

[1] 240-53113685: Design Review Procedure
[2] KUS-202209213: Engineering Change Assessment for Cleaning Downpipes Installation Project
[3] 240-119637905: Belt Conveyor Design Review Standard
[4] 240-55864504 Belt Conveyor Structural Steelwork and Welding Specification
[5] 240-130216207: Kusile Power Station Wet Coal Management Work Instruction

2.3 Definitions

Definition	Description
Contractor	Service provider contracted to provide a specific service to Eskom, Kusile Power Station.
Employer	Eskom, Eskom Kusile Power Station or representative
Baseline	A specification or product that has been formally reviewed and agreed upon, placed under configuration control and documentation management, and that thereafter serves as the basis for further development
Conceptual Design	Process to establish an agreed concept design baseline that complies with the stakeholder requirements as defined by the Client within the URS. The intent of

	the Concept design is to select the most appropriate location for a new ash facility which complies to all Eskom and Government regulations and governance procedures. The design of the new ash facility [including the appropriate technologies] and associated infrastructure is initiated in this phase.
Contracting strategy	Strategy to define and allocate the scope of supply to work packages / jobs (insourcing and outsourcing) and to select the most appropriate form of contract thereto (Workgroup).
Design Base	The Design Base is the combination of the key design outputs that define the functions, capabilities, capacities, physical sizes and dimensions (Physical Base), limits and set points, shutdown and start up sequences, normal and out of normal operations (Operating Technical Specification) and maintenance elements (Maintenance Base), that are required for the asset to meet its required performance, reliability and availability within the limits of the external constraints.
Dewatering System	A system to be installed on SYS2, SYR1, SYR2, SYR3 and SY2A&B conveyors that automatically drains accumulated rainwater from the belts. These systems are located at the head section of each conveyor just before the belts starts inclining to the drive house.
Rainy Season	Periods of heavy rainfall. The Nkangala district typically experiences these between October and March.
Wet Coal	Coal consisting of high fine and a high surface moisture content with instantaneous values above boiler performance guarantees and mill operating specifications. This is typically at a moisture content above 10%.
Engineering Work	The application of specific scientific disciplines in the process of developing, designing, maintaining and operating assets with full cognisance of their design and design limitations in order to improve the lives of people
Multiple Unit Trip (MUT)	Two or more units of a power station that trip within one hour due to a common triggering event, and whose total installed Maximum Continuous Rating (MCR) capacity exceeds the largest single contingency limit.

2.4 Abbreviations

Abbreviation	Explanation
BMH	Bulk Materials Handling
C&I	Control & Instrumentation
CIDB	Construction Industry Development Board
COTS	Commercial Off-The-Shelf
CSY	Coal Stockyard
EC&I	Electrical, Control & Instrumentation
ECN	Engineering Change Notice
ECP	Engineering Change Proposal
ECSA	Engineering Council of South Africa
EC&I	Electrical, Control & Instrumentation
ECN	Engineering Change Notice
ECP	Engineering Change Proposal
EDWL	Engineering Design Work Lead
ERI	Eskom Rotek Industries
Gx	Generation Division

HVAC	Heating, Ventilation, and Air Conditioning
IDC	Interest During Construction
KET	Kusile Execution Team
LDE	Lead Discipline Engineer
LOPP	Life Of Plant Plan
LPS	Low Pressure Services
MC	Moisture Content
MCR	Maximum Continuous Rating
MUT	Multiple Unit Trip
N/A	Not Applicable
O&M	Operation and Maintenance
OH&S	Occupational Health & Safety
PED	Primary Energy Department
PS	Power Station
QMS	Quality Management System
RACI	Responsibility, Accountability, Consult and Inform
ROC	Required Operational Capability
SHEQ	Safety, Health, Environment & Quality
SRD	Stakeholders Requirements Definition
TH	TH Transfer House
UCLF	UCLF Unplanned Capacity Loss Factor

2.5 Roles and Responsibilities

2.5.1 Contractor

a) Execute the defined scope according to contractual agreements, including design and installation of cleaning downpipes at top of coal silo 1&2, top of day bins (day-bin 1-3), top of fly ash silos (silo 1-6) and the horizontal section duct (k1-k6). b) Submit an inspection report for approval by the Employer.

b) Takes full professional accountability and liability for all temporary and permanent Works (design and construction) done by the Contractor.

c) All designs, design reports, design drawings, and Construction drawings prepared by the Contractor are signed off by an ECSA Professionally registered Technologist or Engineer who takes full professional accountability for the designs.

d) The *Contractor* is responsible to issue Professional Engineering Certificate's and as-built drawings for the *works*.

e) Submit subsequent design/construction proposals for approval by the Employer

f) Any discrepancy or ambiguity between the *Employer's* Specifications or requirements is immediately brought to the attention of the *Project Manager* for clarification.

2.5.2 Employer

a) a) Review and approves the Contractor's method statement procedure, QCP and ITP

b) b) Is present for all applicable points of the ITP.

c) c) Provide Engineering support for the certificate of compliance

d) Review and approves the Contractor's construction method statement procedure, QCP and ITP

e) Is present for all applicable points of the ITP

f) Provide Engineering support for information required by the Contractor

2.6 Process for Monitoring
Not applicable

2.7 Related/Supporting Documents
Not Applicable

3. Scope of Works

The scope entails the design and installation of cleaning downpipes at top of silo 1&2, top of day bins (day-bin 1-3), and top of ash silos (silo 1 -6).

3.1 Plant Description

Horizontal duct section (k1-k6)
Kusile PowerStation has got two concrete windshield chimneys and they are called West Chimney and the East Chimney. Each concrete windshield chimney is 220m in height and houses 3 flue ducts (West chimney houses 3 flue ducts for Unit 1-3 and East chimney houses 3 flue ducts for Unit 4-6). The purpose of the chimney and flue ducts is to remove/release by-product gases at a height acceptable to prevent harm to people, animals, and the environment. The horizontal section of the six (6) flue ducts are elevated and do not have a safe material
evacuation chute. Currently the slurry is shovelled through the manhole to the ground which is a safety hazard for the personnel working below the area.

Top of day bins (day-bin 1-3)
Reagent Limestone Silos, well known as Limestone Day-Bins, consists of three (3) silos are utilised as a temporary storage facility for limestone to be used for Reagent Preparation slurry. These Silos
are supported by a structural steel platform with the bottom of the Silos approximately 6.5m above ground level. Each Silo is approximately 26m high and 9m in diameter (refer to Figure 1). Top of day bin is extremely difficult to clean as it is elevated, sloped and without a safe material evacuation point or chute. Currently, the Limestones spillages are shovelled from the top of the day bins to the ground which is a safety hazard for the cleaning personnel and also for other personnel working below the area.

Figure 1: Day bins (day-bin 1-3)

Top of silo 1&2
The Station is designed to operate on two 1000t Coal Silo bins. These bins are essentially designed as big chutes which serve as a reserve where coal is stored prior to entering the station. The coal silos are constructed out of 35MPa reinforced concrete and are elevated above the natural ground level of the site. Silo 1 distribute coal to unit 1-3 whereas Silo 2 distribute coal to unit 4-6.
Top of the silo has been identified as the complex area to clean as it is elevated and does not have a material evacuation point or chute and as a result the material from the spillages is either reloaded back onto the conveyor belts or shovelled down onto the ground or the roof of a transfer house.

Top of ash silos (silo 1-6)
The Purpose of the Fly Ash Silo is to temporarily store fly ash from the Dust Handling Plant and thereafter controls the discharge of fly ash to the conveyor belts that transfers it to the Ash Dump. Each Silo has a discharge cone to ensure ash pressure is uniformly distributed (as well as gradually applied) to the top surface of the hopper slab.
The last area of cleaning complexity is the top of ash Silos (silo 1-6). The fly ash silos are elevated and without spillage evacuation points. Shovelling the ash to the ground requires putting in place numerous measures to avoid safety incidents.

The following is required from the Contractor:

Scope
a) Provide a method statement indicating how the installation of cleaning downpipes will be carried out with the least impact to operations of the Station. The installation methodology shall have the least structural impact.
b) Design, supply and install cleaning downpipes.
c) The Contractor is required to do the structural design check on the existing structure where the downpipes will be installed to ensure that the structural integrity of the existing structure is not compromised in the process.
d) Supply all the necessary equipment, tools, materials required to complete the works.

3.2 Project Boundaries

The project scope entails the design and the installation of the cleaning downpipes in the following areas:

- Top of coal silo 1 and coal silo 2
- Top of day bins (day-bin 1-3)
- Top of ash Silos (silo 1-6)

3.3 Integration with Other Projects

The project does not have an impact on other projects.

3.3.2 Site Visit and Documentation

The following is required from the Contractor.

a) Come to site to view the area before submitting their quote.
b) Submit proposed method statement, QCP and ITP for approval by the Client.
c) Submit relevant welding certificates, QCP and ITP
d) Submit all the signed QCP and ITP documentation once works are completed.
e) Submit all the supplied material documentation once works are completed.
f) Submit a work schedule/programme for the works.

3.4 Test Requirements and Procedure

Testing as per approved method statement

2 Management and start up.

2.1 Management meetings

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Project Kick-off Meeting	3 days Contract Award	Kusile Power Station	Employer, Contractor and Others
SHEQ Requirements Clarification Meeting	3 days after Kick – off meeting	Kusile Power Station	Employer, Contractor and Others
Execution Progress Meeting	Daily	Kusile Power Station	Employer, Contractor and Others
Overall contract progress and feedback	Weekly on Thursdays	Kusile Power Station	Employer and Contractor
Risk register and compensation events	Daily	Kusile Power Station	Employer, Contractor and Others
Other	as and when required		Employer, Contractor and Others

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

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

2.2 Documentation control

The Contractor shall submit all relevant and necessary documentation requested by the Employer and both electronic and hard copy versions of all required documentation. The Contractor shall prepare and submit operations and maintenance manual including as built documents.

To ensure clear communication and effective management of records, all documentation related to this project shall adhere to the following protocol:

1. Document Identification: Each document shall carry a unique alphanumeric identifier. This code will indicate the document source, recipient, and communication number, making the document easily traceable.

2. Document Format: All contractual communications must be in the form of properly compiled letters or forms attached to emails. Messages within the body of an email will not be considered formal communication. Documents should be formatted as PDFs unless otherwise specified.

3. Document Routing: Specific routing requirements must be adhered to. All contractual documents must be issued directly to the relevant party as stipulated in the ECC. The project manager will ensure the documentation is appropriately disseminated and acknowledged.

4. Record Keeping: All communications must be logged in a communication register maintained by the Contractor. The register will document the date, source, recipient, communication number, and a brief summary of the document content.

5. Revision Control: Any changes or revisions to the documents should be clearly marked and issued with a new revision number. All previous versions should be archived for reference.

6. Confidentiality: All documents should be treated as confidential and should not be shared outside the project team without appropriate authorization.

2.3 Health and safety risk management

A Safety, Health, Environment and Quality (SHEQ) specification is Kusile Power Station's minimum requirements detailing also constraints, which are required to be met for the specific contract and for the duration of the contract period by the Contractor.
The Contractor is expected to develop a SHEQ plan which meets these requirements as well as relevant and other legal and other requirements applicable to the issued scope of work.
Kusile Power Station in no way assumes the contractor's legal responsibilities. The contractor is and remains accountable for the quality and the execution of his/her health and safety programme for his/her employees and appointed contractor employees.
This SHEQ specification reflects minimum requirements and should not be construed as all encompassing.
The Contractor shall comply with (SHEQ) requirements contained in Annexure A of this Works Information.

2.4 Environmental constraints and management

A Safety, Health, Environment and Quality (SHEQ) specification is Kusile Power Station's minimum requirements detailing also constraints, which are required to be met for the specific contract and for the duration of the contract period by the Contractor.
The Contractor is expected to develop a SHEQ plan which meets these requirements as well as relevant and other legal and other requirements applicable to the issued scope of work.
Kusile Power Station in no way assumes the contractor's legal responsibilities. The contractor is and remains accountable for the quality and the execution of his/her health and safety programme for his/her employees and appointed contractor employees.
This SHEQ specification reflects minimum requirements and should not be construed as all encompassing.
The Contractor shall comply with (SHEQ) requirements contained in Annexure A of this Works Information

2.5 Quality assurance requirements

The quality requirements are as per ISO 9001 and Employer Quality Requirements as specified in the SHEQ specification in Annexure A.

This quality management philosophy is developed from the basis that suppliers produce quality products, supervisor oversees the process, checks quality but liability for quality remains with the Contractor. The Contractor submits a QMS as a returnable schedule and uses it for all phases of the Project. The QMS complies with the requirements of ISO 9001:2008 standard. The Contractor provides evidence of a fully implemented QMS as and when requested by the Project manager. The Project Manager may at his sole discretion carry out an audit on the Contractor, the Contractor's suppliers and Sub-Contractors

Quality control plans will be produced by the Contractor or manufacturer which will indicate the level of product quality control to be applied. The CQP must be aligned to, and reference ISO 10006 QMS, guidelines for quality plans and in compliance with the guideline in 240-105658000. The CQP will make reference to the Contractor's QMS Procedures to be used in this Contract. This plan will be reviewed by the Project Manager. The project team monitors that these plans are being implemented and that it is yielding the expected results through process and product verifications.

2.6 Programming constraints

The Contractor shall execute the Works per the submitted schedule or as agreed between the Contractor and the Employer. The Contractor shall notify the Employer timeously should there be any changes in the submitted programme. The Contractor shall also acquaint themselves with the work involved and verify all quantities, materials etc. necessary to undertake the Works, for proper programming and co-ordination.
Programme format – The Contractor to issue the programme using either MS Projects (soft copy) or Primavera (soft copy). Programme is to be submitted as indicated in the Contract Data.

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

The Contractor must submit an organogram one month after Contract Start Date, to the Project Manager, based on the Contractor's plan and their lines of authority / communication.

2.8 Invoicing and payment

The Z clauses make reference to invoicing procedures stated here in this Service Information. Also include a list of information which is to be shown on an invoice.

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

The *Contractor* shall address the tax invoice to Eskom Holdings SOC Ltd and include on each invoice the following information:

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

The invoice is to be submitted to **invoiceseskomlocal@eskom.co.za** once confirmed with the payment certificate.

Add procedures for invoice submission and payment (e.g. electronic payment instructions)

2.9 Insurance provided by the *Employer*

As stated in the Contract Data

2.10 Contract change management

All changes to the Contract, such as Contractor management changes or Compensation events shall be communicated through standard NEC ECC 3 forms.

2.11 Provision of bonds and guarantees

Not applicable

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

Indicated rates will be used for assessment of compensation events.

2.13 Training workshops and technology transfer

Not Applicable

3 Engineering and the *Contractor*'s design

Employer to keep the designs after the contract lapse, after approval from the Employers side

3.1 *Employer*'s design

The contractor to provide design after the service completion

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

Contractor to provide Supports designs and Drawings as per the Scope of Work

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

All designs and specifications to be submitted to the Project Manager and approved by the Engineer of the Employer prior construction works commence.

"As built" drawings, compliance certificates, guarantees to be submitted to the Project Manager as part of handover before Completion of the works.

3.4 Other requirements of the *Contractor*'s design

Applicable as per the Scope of Work

3.5 Use of *Contractor*'s design

- Detailed drawings for fabrication and construction. Drawings shall be submitted in DWG/DGN and PDF formats.
- All submitted drawings to be signed by an applicable Professionally Registered Engineer.
- Construction/installation Specifications for the works including measurement and payment items

3.6 Design of Equipment

To be incorporated within the main design

3.7 Equipment required to be included in the *works*

As per the scope of work, Contractor to provide their own Equipment

3.8 As-built drawings, operating manuals and maintenance schedules

The Contractor is responsible to plan for the supply of the commissioning manual, maintenance manual, functional description, and operating manual of the system including safety procedures for operating and maintain the system. The Contractor shall provide P&ID, Piping drawings, and wiring drawings for the system.

The Contactor shall develop and submit as-built data and drawings of the completed Works upon handover. As-built drawings shall be submitted in PDF and DGN/DWG formats.

4 Procurement

4.1 People

4.1.1 Minimum requirements of people employed on the Site

Minimum requirements of people employed
- All staff required to perform the activities within the works information
- All relevant personnel names and titles must be specified to the Service Manager
- All Contractors personnel specified in this contract as per 2.3 to be on site at all times
- All new staff to be appointed in writing.
- Contract Staff are not allowed to work on any other contract.
- All new staff to do induction training
- All replacements of staff will be in the same discipline (like an artisan with an artisan with proof of qualifications)
- All new staff to be approved by Service Manager before entering the site or commencing work
- All new staff must hand in all qualifications and relevant documentation to the Service Manager
- When changing personnel a new access to work form to be completed by the Contractor
- Only required specified approved amount of personnel to be allowed on site, pre-arrange with Service Manager

4.1.2 BBBEE and preferencing scheme

Specify constraints which *Contractor* must comply with after contract award in regard to any Broad Based Black Economic Empowerment (B-BBEE) or preferencing scheme measures.

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

The contractor to comply to the agreed SD&L during negotiations

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

.

[Insert the agreed ASGI-SA Compliance Schedule here]

The *Contractor* shall keep accurate records and provide the *Project Manager* with reports on the *Contractor*'s actual delivery against the above stated ASGI-SA criteria. [Elaborate on access to and format of records and frequency of submission etc.]

The *Contractor*'s failure to comply with his ASGI-SA obligations constitutes substantial failure on the part of the *Contractor* to comply with his obligations under this contract.

4.2 Subcontracting

4.2.1 Preferred subcontractors

Subcontracting is acceptable

4.2.2 Subcontract documentation, and assessment of subcontract tenders

Not Applicable

4.2.3 Limitations on subcontracting

Not Applicable

4.2.4 Attendance on subcontractors

Not Applicable

4.3 Plant and Materials

4.3.1 Quality

Refer to Quality Requirements

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

- Water
- Ablution Facilities
- Electricity

4.3.3 *Contractor*'s procurement of Plant and Materials

Contractor to procure plant and material to fulfil the technical requirements for the works.

4.3.4 Spares and consumables

No spares required

4.4 Tests and inspections before delivery

To ensure the quality and performance of the work, the inspections of supports must be carried out before the delivery of Supports to the Working Areas. These procedures aim to mitigate risks and ensure that the project adheres to the agreed specifications and standards.

Inspection by the Employer's Engineer and Project Manager: The Employer's Engineer and Project Manager are to carry out a thorough inspection of the Supports prior to delivery.

This inspection will involve checking the physical condition of the Supports, its alignment with design specifications, and its readiness for installation. The contractor must facilitate this inspection, providing all necessary documentation and access.

4.5 Marking Plant and Materials outside the Working Areas

Not applicable

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

The Contractor to purchase all equipment required for the works.

4.7 Cataloguing requirements by the *Contractor*

The Contractor is required to submit technical specification of all components for cataloguing. The Employer will furnish the Contract with forms to complete according to Procurement Instruction Number 1 of 2018 – Incorporating Cataloguing into the Procurement Environment, Unique Identifier 240-1289988974 after Contract award for submission after completion of the works.

5 Construction

5.1 Temporary works, Site services & construction constraints

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

The Contractor is to inform the Project Manager of the request for access to Site prior to the date of reporting to Site.
The Contractor to report to the Kusile Power Station Security gate on arrival, to comply with all security requirements.

- Lifesaving rules to be adhered at all times
- All personnel must attend induction before working on site and must obtain gate permits via the Project Manager.
- Contractor to comply to the Eskom values and rules, e.g No taking Pictures without approval, no walking and texting
- Access is limited and controlled by Plant Safety Regulations requirements.
- No employee will be allowed to access the plant or to work without access permit issued.
- All personnel to work on the plant must be registered on the Worker's Register by the Responsible Person.
- Each personnel to have an Identification card at all times
- Unauthorized access to site is prohibited. The personnel are expected to be at their working site area at all times.
- No recruitment on site or at the main access gates or any Premises of the Employer is allowed.
- All activities to comply with the OSHACT and Regulations
- All activities on plant must be preceded by a plant risk assessment – Risk assessment as per the standard of the Employer, to be current at all times (Live Document)
- All work to be done according to the construction regulations at all times

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

Site restructuration on site to be shared after contract date.

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

The Contractor is responsible for management and administration of his people to comply with all the Employer's requirements for the duration of the contract.

Normal working hours: 07h00 to 16h30 (Monday to Thursday)
07h00 to 12h00 Fridays

The Contractor keeps records of his people working on the Affected Property
Time sheets to be controlled weekly and signed of by the Employer Supervisor.
No valuable assets of the Contractor to be left onsite without security approval.

5.1.4 Health and safety facilities on Site

A Safety, Health, Environment and Quality (SHEQ) specification is Kusile Power Station's minimum requirements detailing also constraints, which are required to be met for the specific contract and for the duration of the contract period by the Contractor.
The Contractor is expected to develop a SHEQ plan which meets these requirements as well
as relevant and other legal and other requirements applicable to the issued scope of work.
Kusile Power Station in no way assumes the contractor's legal responsibilities. The contractor is and remains accountable for the quality and the execution of his/her health and safety programme for his/her employees and appointed contractor employees.
This SHEQ specification reflects minimum requirements and should not be construed as all encompassing.
The Contractor shall comply with (SHEQ) requirements contained in Annexure A of this Works Information.

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

A Safety, Health, Environment and Quality (SHEQ) specification is Kusile Power Station's minimum requirements detailing also constraints, which are required to be met for the specific contract and for the duration of the contract period by the Contractor.
The Contractor is expected to develop a SHEQ plan which meets these requirements as well
as relevant and other legal and other requirements applicable to the issued scope of work.
Kusile Power Station in no way assumes the contractor's legal responsibilities. The contractor is and remains accountable for the quality and the execution of his/her health and safety programme for his/her employees and appointed contractor employees.
This SHEQ specification reflects minimum requirements and should not be construed as all encompassing.
The Contractor shall comply with (SHEQ) requirements contained in Annexure A of this Works Information.

5.1.6 Title to materials from demolition and excavation

Not applicable

5.1.7 Cooperating with and obtaining acceptance of Others

1) The Contractor will be required to work with Others with whom the Contractor may be required to share the Affected Property.
2) Requirements for liaison with and acceptance from statutory authorities or inspection agencies will be communicated when required

5.1.8 Publicity and progress photographs

The Contractor to Comply to Eskom rules of no Photography

5.1.9 *Contractor*'s Equipment

Contractor to declare their equipment's and tools

- Contractor's equipment (Cell phones with Camera's, Computers, Camera's etc.) to be and signed in at security.
- All test equipment must be calibrated and tested regularly and certificates must be handed in to the Service Manager for record keeping

- All equipment and tools needs to be marked and a list off all tools with the identification number to be provided to the Service Manager when entering site.
- All lost equipment and tools to be declared to the Service Manager and full details of incident.

5.1.10 Equipment provided by the *Employer*

The Contractor supplies equipment required for the works.

5.1.11 Site services and facilities

The Employer will provide the Contractor with the following services whilst doing work on the Affected Property

1. Water
2. Electricity
3. Ablution Facilities
4. Fire Protection equipment
5. Waste disposal Facilities
6. Other facilities e.g., Canteens for personal accounts are available on site.
7. The Employer shall provide a Contractor's employee with internet access for communication purposes.
8. Contractor shall provide everything else necessary for providing the Works.

5.1.12 Facilities provided by the *Contractor*

The Contractor is to provide for himself the following:
1. Vehicles
2. Site Establishment containers
3. Personal Protective Equipment (branded with the Contractor's name) as per safe work requirements.
4. Contractor shall provide everything else necessary for providing the works.

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

The contractor shall do inspections as per Scheduled Work Order and report al defects to the Employer's Supervisor / Employer

5.1.14 Survey control and setting out of the *works*

The Contractor is responsible for setting out of the works.

5.1.15 Excavations and associated water control

Excavation is not required

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

Contractor to asses' area of works as report risks prior to works commence.

5.1.17 Control of noise, dust, water and waste

- All necessary and relevant PPE must be used at all time when entering or working on plant
- Risk assessments must be completed before commencing with any task to be current at all times (Live Document)
- All relevant procedures to be used at all times

5.1.18 Sequences of construction or installation

Sequence to be detailed by the Contractor in the submitted programme

5.1.19 Giving notice of work to be covered up

- The Supervisor to be notified within the notification period as per Contract Data
- The employer shall Issue notice as early as possible as per the ECC contract

5.1.20 Hook ups to existing works

Contractor to assess area of works and report hook ups prior to works commence. Hooking up on heights is a non-negotiable Lifesaving rule of Eskom. Kusile Power Station applies Zero Tolerance to non-compliance of this rule or any other Lifesaving rule. The same disciplinary process procedure will be followed when any of the Lifesaving rules have been breached

5.2 Completion, testing, commissioning and correction of Defects

5.2.1 Work to be done by the Completion Date

All work is to be done by the Completion Date.

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

Completion is when the Contractor has done all the work, which the Works Information states he is to do by the Completion Date and has corrected notified Defects, which would have prevented the Employer from using the works. The Site is handed back to the Employer in a condition acceptable to the Project Manager

5.2.3 Materials facilities and samples for tests and inspections

The Contractor shall be responsible for the testing of the Works. The Works shall be tested in accordance with the latest standards and procedures as outlined by the South African Bureau of Standards (SABS)/South African National Standards (SANS) as well as any other applicable and relevant standards and specifications.

5.2.4 Commissioning

Refer to the scope of works for commissioning works. Commissioning is performed with the involvement of the Employer and Others.

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

Contractor to issue procedures to the employer

5.2.6 Take over procedures

Takeover is at the same time as Completion.

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

The Project Manager arranges in time to allow the Contractor access to and use of a part of the works which has been taken over if needed to correct a Defect. After the works have been put into operation, the Employer may require the Contractor to undertake certain procedures before such access can be granted.

5.2.8 Performance tests after Completion

Upon the completion of the installation, the Contractor will be required to perform comprehensive performance tests on the Installed Supports to demonstrate that it operates correctly and meets all the requirements specified in the Contractor's Works Information. The performance tests should follow a well-defined procedure, and any deviations from the expected performance should be duly reported, with appropriate corrective measures taken.

The performance tests should assess the following aspects:

- Functionality: Confirm that all features of the GRP Supports operate as intended.
- Reliability: Determine the ability of the Supports to perform consistently over time.
- Compatibility: Ensure the Supports structure integrates seamlessly with the existing infrastructure

5.2.9 Training and technology transfer

N/A

5.2.10 Operational maintenance after Completion

The Employer will require the Contractor before the defects date to perform faultfinding and repairs should there be a standing fault as a result of a defect as per notification of the Employer.

6 Plant and Materials standards and workmanship

6.1 Investigation, survey and Site clearance

Not applicable

6.2 Building works

Not applicable

6.3 Civil engineering and structural works

Applicable as per SOW

6.4 Electrical & mechanical engineering works

Applicable as per SOW

6.5 Process control and IT works

Not applicable

6.6 Other [as required]

Not applicable

7 List of drawings

7.1 Drawings issued by the *Employer*

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

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

Drawing number	Revision	Title
To be supplied upon request		

C3.2 *CONTRACTOR*'S WORKS INFORMATION

- The Contractor shall execute the Works per the submitted schedule or as agreed between the Contractor and the Employer. The Contractor shall notify the Employer timeously should there be any changes in the submitted programme. The Contractor shall also acquaint themselves with the work involved and verify all quantities, materials etc. necessary to undertake the Works, for proper programming and co-ordination.
- Programme format – The Contractor to issue the programme using either MS Projects (soft copy) or Primavera (soft copy)
- The program should be updated as per the changes on Outage listing
- Programme is to be submitted as indicated in the Contract Data.
-

PART 4: SITE INFORMATION

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

PART 4: SITE INFORMATION

Core clause 11.2(16) states

"Site Information is information which

- describes the Site and its surroundings and
- is in the documents which the Contract Data states it is in."

In Contract Data, reference has been made to this Part 4 of the contract for the location of Site Information.

1. General description

Site	:	Kusile Power Station
Regional Authority	:	Emalahleni Local Municipality, Mpumalanga Province
Nearest Towns	:	Emalahleni – 42km north east of power station Bronkhorstspruit – 41km south of power station Delmas – 45km north of power station There are informal settlements within a 10 km radius of the power station.
Infrastructure	:	Kusile Power Station is situated approximately 3km from the N4 highway and is connected to it by means of a tarred road. There is also a secondary tarred road connecting the site with the R545 and D686.
Latitude & longitude	:	
Landowner	:	Portions of Horingkraans Farm
River catchment	:	Wilge River
Regional Climate		Kusile Power Station is situated in the Mpumalanga Province on the Highveld in the western part of Mpumalanga province on the escarpment, at an average height of 1551 m above sea level. The winters are generally dry and cold with regular frost and temperatures varying between -7ºC and 23ºC. The summers are mild with most of the rainfall occurring during this season. Temperatures vary between 12º & 32º C.
Wind direction		Data from the Emalahleni weather station shows that Kusile Power Station is sited in such a way that for most of the year (291 days) the wind direction is from the power station in a direction that is North West.
Rainfall		Based on information recorded at the Emalahleni weather station, the average annual rainfall for the Emalahleni area is approximately 691 mm. (Weather Bureau, Pretoria).

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

- The Contractor will be required to work with others with whom the Contractor may be required to share the Affected Property.
- Requirements for liaison with and acceptance from statutory authorities or inspection agencies will be communicated when required
- Any risk arises due to buildings, structures, and plant & machinery on the Site to be communicated with the project manager prior to work commencement.

3. Subsoil information

Not Applicable

4. Hidden services

Not Applicable

5. Other reports and publicly available information

Not Applicable