



NEC3 Engineering & Construction Contract

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

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

for **Drakensberg Jagersrust Water Pipeline Replacement**

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

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

Part C1: Agreements & Contract Data

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

C1.1 Form of Offer & Acceptance

Offer

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

Drakensberg Jagersrust Water Pipeline Replacement

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

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

Options A	The offered total of the Prices exclusive of VAT is	R [●]
		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
Name & organisation)

signature of
witness

Date

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*.

Tenderer's CIDB registration number (if applicable)

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 and Acceptance)	Agreements and Contract Data, (which includes this Form of Offer
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)	Avi Singh	_____
Capacity	General Manager – Peaking Operating Unit	_____
for the Employer	Eskom Holdings SOC Limited PO Box 3487 Tygervalley 7536	_____

Date

ECC3

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.

<p>For the tenderer:</p> <p>Signature _____</p> <p>Name _____</p> <p>Capacity _____</p>	<p>For the Employer</p> <p>_____</p> <p>_____</p> <p>Avi Singh</p> <p>_____</p> <p>General Manager – Peaking Operating Unit</p>
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On behalf of _____
(Insert name and address of organisation)

_____ Eskom Holdings SOC Limited
PO Box 3487
Tygervally
7536

Name &
signature
of
witness _____

_____ Marna Bester

Date _____

C1.2 ECC3 Contract Data

Part one - Data provided by the *Employer*

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

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
	dispute resolution Option	A: Priced contract with activity schedule
	and secondary Options	W1: Dispute resolution procedure
		X2: Changes in the law
		X7: Delay damages
		X13: Performance Bond
		X15: Limitation of <i>Contractor's</i> liability for design to reasonable skill and care
		X16: Retention
		X18: Limitation of liability
		Z: <i>Additional conditions of contract</i>
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> is (Name):	Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state-owned company incorporated in terms of the company laws of the Republic of South Africa
	Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
10.1	The <i>Project Manager</i> is: (Name)	Lubabalo Caba
	Address	01 Maxwell Drive, Sunninghill, Sandton
	Tel	011 800 4174
	e-mail	CabaL@eskom.co.za

10.1	The <i>Supervisor</i> is: (Name)	Lubabalo Caba									
	Address	01 Maxwell Drive, Sunninghill, Sandton									
	Tel No.	011 800 4174									
	e-mail	CabaL@eskom.co.za									
11.2(13)	The <i>works</i> are	Design of a new potable water supply pipeline, Replace and re-route all pipelines with new pipes, install new pipe supports, thrust blocks if required, restraints and other ancillary work necessary, replace all valves with new, refurbish existing reservoirs, replace all asbestos pipelines with new pipelines, maintenance schedule to be drawn up to ensure expected life of the pipelines, valves and reservoirs, testing and commissioning of the water pipeline and reticulation system.									
11.2(14)	The following matters will be included in the Risk Register	All early warning matters notified by the <i>Project Manager</i> or the <i>Contractor</i>									
11.2(15)	The <i>boundaries of the site</i> are	Drakensberg Water treatment plant and Jagersrust Development									
11.2(16)	The Site Information is in	Part 4: Site Information									
11.2(19)	The Works Information is in	Part 3: Scope of Work and all documents and drawings to which it makes reference.									
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa									
13.1	The <i>language of this contract</i> is	English									
13.3	The <i>period for reply</i> is	2 working days prior to site installation and 24 hours during site installation									
2	The <i>Contractor's</i> responsibilities	main Data required by this section of the core clauses is provided by the <i>Contractor</i> in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.									
3	Time										
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	15 December 2023.									
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	<table><tr><td colspan="2"><i>Condition to be met</i></td><td><i>key date</i></td></tr><tr><td>1</td><td>Detailed Submission Design</td><td>31 March 2023</td></tr><tr><td>2</td><td>Installation Start</td><td>01 June 2023</td></tr></table>	<i>Condition to be met</i>		<i>key date</i>	1	Detailed Submission Design	31 March 2023	2	Installation Start	01 June 2023
<i>Condition to be met</i>		<i>key date</i>									
1	Detailed Submission Design	31 March 2023									
2	Installation Start	01 June 2023									

		3	Commissioning Completed	30 September 2023
30.1	The <i>access dates</i> are:	Part of the Site		Date
		1	Water treatment plant and Jagersrust Development	30 May 2023
31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	2 (Two) weeks of the Contract Date.		
31.2	The <i>starting date</i> is	15 December 2022		
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	1 (One) week.		
4	Testing and Defects			
42.2	The <i>defects date</i> is	52 weeks after Completion of the whole of the <i>works</i> .		
43.2	The <i>defect correction period</i> is	2 (Two) weeks		
5	Payment			
50.1	The <i>assessment interval</i> is	the 25 th day of each successive month.		
51.1	The <i>currency of this contract</i> is the	South African Rand.		
51.2	The period within which payments are made is	30 days after receipt of acceptable Tax Invoice and all relevant supporting documentation.		
51.4	The <i>interest rate</i> is	the publicly quoted prime rate of interest (calculated on a 365-day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it 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	Applicable as per Section 6 of the NEC 3 ECC (April 2013)
60.1(13)	The place where weather is to be recorded is: The <i>weather measurements</i> are supplied by	The South African Weather Bureau, Royal Natal Weather Station The <i>Contractor</i> to obtain the one in ten-year return weather data from South African Weather Bureau
7	Title	Applicable as per Section 7 of the NEC 3 ECC (April 2013).
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	None
9	Termination	Applicable as per Section 9 of the NEC 3 ECC (April 2013).
10	Data for main Option clause	
A	Priced contract with activity schedule	Refer to part 2: Pricing Data of this contract.
11	Data for Option W1	
W1.1	The <i>Adjudicator</i> is	the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).
W1.2(3)	The <i>Adjudicator nominating body</i> is:	the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See www.ice-sa.org.za) or its successor body.
W1.4(2)	The <i>tribunal</i> is:	arbitration.

W1.4(5)	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.
	The place where arbitration is to be held is	Johannesburg, South Africa
	The person or organisation who will choose an arbitrator	
	<ul style="list-style-type: none"> - 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	Applicable as per secondary option Clause X2.
X13	Performance bond	
X13.1	The amount of the performance bond is	10% of the contract value.
X7	Delay damages	
X7.1	Delay damages for Completion of the whole of the <i>works</i> are	R5000 per day up to a limit of 10% of the total of the Prices.
X15	Limitation of the Contractor's liability for his design to reasonable skill & care	Applicable as per secondary clause X15
X16	Retention	
X16.1	The <i>retention free amount</i> is	R0.00.
	The <i>retention percentage</i> is	10% of the Prices, 5% will be released at Completion of the whole of the <i>works</i> and the remaining 5% will be released after the Defects Certificate has been issued.
X18	Limitation of liability	
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	R0.0 (zero Rand)
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	the amount of the deductibles relevant to the event described in the insurance policy format selected in the data for clause 84.1 above, which is available on request from Eskom Group Insurance.
X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to	The greater of <ul style="list-style-type: none"> • the total of the Prices at the Contract Date

		<p>and</p> <ul style="list-style-type: none"> the amounts excluded and unrecoverable from the <i>Employer's</i> assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus the applicable deductible as at contract date.
X18.4	<p>The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:</p>	<p>the total of the Prices other than for the additional excluded matters.</p> <p>The <i>Contractor's</i> total liability for the additional excluded matters is not limited.</p> <p>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for</p> <ul style="list-style-type: none"> 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 <i>works</i>, Plant and Materials), death of or injury to a person and infringement of an intellectual property right.
X18.5	<p>The <i>end of liability date</i> is</p>	<p>(i) 1 (one) year after the <i>defects date</i> for latent Defects and</p> <p>(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.</p> <p>A latent Defect is a Defect which would not have been discovered on reasonable inspection by the <i>Employer</i> or the <i>Supervisor</i> before the <i>defects date</i>, without requiring any inspection not ordinarily carried out by the <i>Employer</i> or the <i>Supervisor</i> during that period. If the <i>Employer</i> or the <i>Supervisor</i> do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the <i>Employer</i> or the <i>Supervisor</i> to have discovered the Defect.</p>
Z	<p>The <i>Additional conditions of contract</i> are</p>	<p>Z1 to Z15 always apply.</p>

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 <i>Contractor</i> 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 <i>Contractor</i> , 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 minimum indemnity
Loss of or damage to the works, Plant and Materials	<p>The replacement cost where not covered by the <i>Employer's</i> insurance</p> <p>The <i>Employer's</i> policy deductible, as at Contract Date, where covered by the <i>Employer's</i> insurance</p>
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 <i>Contractor</i>) caused by activity in connection with this contract	<p><u>Loss of or damage to property</u></p> <p><u>Employer's property</u></p> <p>The replacement cost where not covered by the <i>Employer's</i> insurance</p> <p>The <i>Employer's</i> policy deductible, as at Contract Date, where covered by the <i>Employer's</i> insurance</p> <p><u>Other property</u></p> <p>The replacement cost</p> <p><u>Bodily injury to or death of a person</u></p> <p>The amount required by applicable law</p>

Liability for death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract	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 limit of indemnity
Assets All Risk	Per the insurance policy document
Contract Works insurance	Per the insurance policy document
Environmental Liability	Per the insurance policy document
General and Public Liability	Per the insurance policy document
Transportation (Marine)	Per the insurance policy document
Motor Fleet and Mobile Plant	Per the insurance policy document
Terrorism	Per the insurance policy document
Cyber Liability	Per the insurance policy document
Nuclear Material Damage and Business Interruption	Per the insurance policy document
Nuclear Material Damage Terrorism	Per the insurance policy document

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*

Whenever a cell is shaded in the left-hand column it denotes this data is optional. If not required select and delete the whole row, otherwise insert the required Data.]

Notes to a tendering contractor:

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

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

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

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

	Responsibilities: Qualifications: Experience:	CV's (and further key persons data including CVs) are appended to Tender Schedule entitled .
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	15 December 2023
11.2(14)	The following matters will be included in the Risk Register	C3.1 ECC3 Employers Works Information
11.2(19)	The Works Information for the <i>Contractor's</i> design is in:	C3.1 ECC3 Employers Works Information
31.1	The programme identified in the Contract Data is	C3.1 ECC3 Employers Works Information
A	Priced contract with activity schedule	
11.2(20)	The <i>activity schedule</i> is in	Part 2: C.2.2 - Activity Schedule
11.2(30)	The tendered total of the Prices is	(in figures) (in words), excluding VAT
	Data for Schedules of Cost Components	<i>Note "SCC" means Schedule of Cost Components starting on page 60, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC3 (April 2013).</i>
A	Priced contract with activity schedule	Data for the Shorter Schedule of Cost Components

C1.3 Forms of Securities

Pro formas for Bonds & Guarantees

For use with the NEC3 Engineering & Construction Contract

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

Option X13: Performance Bond
Option X16: Retention

Pro forma Performance Bond – Demand Guarantee (for use with Option X13)

(to be reproduced exactly as shown below on the letterhead of the Contractor's Parent Company)

Eskom Holdings SOC Ltd
Megawatt Park
Maxwell Drive
Sandton
Johannesburg

Date:

Dear Sirs

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

Performance Bond – Demand Guarantee: *[Drafting Note: Name of Contractor to be inserted]*

Project [] Contract Reference: *[Drafting Note: Contractor contract reference number to be inserted]*

1. In this Guarantee the following words and expressions shall have the following meanings:-
 - 1.1 “Bank” - means [●], [●] Branch, (Registration No. [●]); *[Drafting Note: Name of Bank to be inserted]*
 - 1.2 “Bank’s Address” - means [●]; *[Drafting Note: Bank’s physical address to be inserted]*
 - 1.3 “Contract” – means the written agreement relating to the Project, entered into between Eskom and the Contractor, on or about the [●] day of [●] 200[●] (Contract Reference No. [.] as amended, varied, restated, novated or substituted from time to time; *[Drafting Note: Signature Date and Contract reference number to be inserted]*
 - 1.4 “Contractor” – means [●] a company registered in accordance with the laws of [●] under Registration Number [●]. *[Drafting Note: Name and details of Contractor to be inserted]*
 - 1.5 “Eskom” - means Eskom Holdings SOC Ltd, a company registered in accordance with the laws of the Republic of South Africa under Registration Number

2002/015527/30].

- 1.6 “Expiry Date” - means the date on which the Defects Certificate is issued in terms of the Contract.
- 1.7 “Guaranteed Sum” - means the sum of R [●] ([●] Rand);
- 1.8 “Project” - means [insert if applicable.].
2. At the instance of the Contractor, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of Eskom, as security for the proper performance by the Contractor of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to Eskom, on written demand from Eskom received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.
3. A demand for payment under this guarantee shall be made in writing at the Bank’s address and shall:
- 3.1 be signed on behalf of Eskom by a Group Executive, Divisional Executive, Senior General Manager, General Manager or its delegate.
- 3.2 state the amount claimed (“the Demand Amount”);
- 3.3 state that the Demand Amount is payable to Eskom in the circumstances contemplated in the Contract.
4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank’s obligation/s to make payment:
- 4.1 is and shall be absolute provided demand is made in terms of this bond in all circumstances; and
- 4.2 is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.
5. The Bank’s obligations in terms of this Guarantee:
- 5.1 shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
- 5.2 shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between Eskom and the Contractor.
6. Eskom shall be entitled to arrange its affairs with the Contractor in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the Contractor or any variation under or to the Contract.
7. Should Eskom cede its rights against the Contractor to a third party where such cession is permitted under the Contract, then Eskom shall be entitled to cede to such third party the rights of Eskom under this Guarantee on written notification to the Bank of such cession.

8. This Guarantee:
- 8.1 shall expire on the Expiry Date until which time it is irrevocable;
- 8.2 is, save as provided for in 7 above, personal to Eskom and is neither negotiable nor transferable;
- 8.3 shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
- 8.4 shall be regarded as a liquid document for the purpose of obtaining a court order; and
- 8.5 shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa.
- 8.6 Any claim which arises or demand for payment received after expiry date will be invalid and unenforceable.
9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____ Date _____

For and behalf of the Bank

Bank Signatory: _____ Bank Signatory: _____

Witness: _____ Witness: _____
Bank's seal or stamp

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

The *Contractor* shall guarantee his ASGI-SA Obligations by providing the *Employer* with an ASGI-SA Guarantee in the form provided here.

The organisation providing the bond / guarantee does so by copying the pro forma document onto his letterhead without any change to the text or format and completing the required details. The completed document is then given to the *Employer* within the time stated in the contract.

Signed _____ on this _____ day of _____ 2022
at _____

Signature(s)

Name(s) (printed)

Position in parent company

Signature of Witness(s)

Name(s) (printed)

Pro forma Retention Money Guarantee

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

**Eskom Holdings SOC Limited
Megawatt Park
Maxwell Drive
Sandton
Johannesburg**

Date:

Dear Sirs

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

Retention Money Guarantee: *[Drafting Note: Name of Contractor to be inserted]*

Project [] : Contract Reference: *[Drafting Note: Contractor contract reference number to be inserted]*

1. In this Guarantee the following words and expressions shall have the following meanings:-
 - 1.1 "Bank" - means [●], [●] Branch, (Registration No. [●]); *[Drafting Note: Name of Bank to be inserted]*
 - 1.2 "Bank's Address" - means [●]; *[Drafting Note: Bank's physical address to be inserted]*
 - 1.3 "Contract" – means the written agreement relating to the Project, entered into between Eskom and the Contractor, on or about the [●] day of [●] 200[●] (Contract Reference No. as amended, varied, restated, novated or substituted from time to time; *[Drafting Note: Signature Date and Contract reference number to be inserted]*)

- 1.4 “Contractor” – means [●] a company registered in accordance with the laws of [●] under Registration Number [●]. [Drafting Note: Name and details of Contractor to be inserted]
- 1.5 “Eskom” - means Eskom Holdings SOC Limited, a company registered in accordance with the laws of the Republic of South Africa under Registration Number 2002/015527/30
- 1.6 “Expiry Date” - means the date on which the Defects Certificate is issued in terms of the Contract.
- 1.7 “Guaranteed Sum” - means the sum of R [●] ([●] Rand); [Drafting Note: Insert amount of Retention Money Guarantee.].
- 1.8 “Project” - means the.....
2. At the instance of the Contractor, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of Eskom, as security for the proper performance by the Contractor of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to Eskom, on written demand from Eskom received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.
3. A demand for payment under this guarantee shall be made in writing at the Bank’s address and shall:
- 3.1 be signed on behalf of Eskom by a director of Eskom or his authorised delegate.
- 3.2 state the amount claimed (“the Demand Amount”);
- 3.3 state that the Contractor has failed to carry out his obligation(s) to rectify certain defect(s) for which he is responsible under the Contract (and the nature of such defect(s)) alternatively that the Demand Amount is payable to Eskom in the circumstances contemplated in the Contract.
4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank’s obligation/s to make payment:
- 4.1 is and shall be absolute provided demand is made in terms of this bond in all circumstances; and
- 4.2 is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.
5. The Bank’s obligations in terms of this Guarantee:
- 5.1 shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
- 5.2 shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed by the fact that a dispute may exist between Eskom and the Contractor.
6. Eskom shall be entitled to arrange its affairs with the Contractor in any manner which it

sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the Contractor or any variation under or to the Contract.

7. Should Eskom cede its rights against the Contractor to a third party where such cession is permitted under the Contract, then Eskom shall be entitled to cede to such third party the rights of Eskom under this Guarantee on written notification to the Bank of such cession.
8. This Guarantee:
 - 8.1 shall expire on the Expiry Date until which time it is irrevocable;
 - 8.2 is, save as provided for in **7** above, personal to Eskom and is neither negotiable nor transferable;
 - 8.3 shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
 - 8.4 shall be regarded as a liquid document for the purpose of obtaining a court order; and
 - 8.5 shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa.
 - 8.6 Any claim which arises or demand for payment received after expiry date will be invalid and unenforceable.
9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____ Date _____ Bank's seal or stamp

For and behalf of the Bank

Bank Signatory: _____ Bank Signatory: _____

Witness: _____ Witness: _____

Pro forma ASGI-SA

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

**Eskom Holdings Limited
Megawatt Park
Maxwell Drive
Sandton
Johannesburg**

Date:

Dear Sirs

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

Pro-Forma ASGI-SA Guarantee: *[Drafting Note: Name of Contractor to be inserted]*

Project [] Contract Reference: [●] *[Drafting Note: Contractor contract reference number to be inserted]*

1. In this Guarantee the following words and expressions shall have the following meanings:-
 - 1.1 “Bank” - means [●], [●] Branch, (Registration No. [●]); *[Drafting Note: Name of Bank to be inserted]*
 - 1.2 “Bank’s Address” - means [●]; *[Drafting Note: Bank’s physical address to be inserted]*
 - 1.3 “Contract” – means the written agreement relating to the Project, entered into between the *Employer* and the *Contractor*, on or about the [●] day of [●] 200[●] (Contract Reference No. [●] as amended, varied, restated, novated or substituted from time to time; *[Drafting Note: Signature Date and Contract reference number to be inserted]*
 - 1.4 “*Contractor*” – means [●] a company registered in accordance with the laws of [●] under Registration Number [●]. *[Drafting Note: Name and details of Contractor to be inserted]*
 - 1.5 “*Contractor’s ASGI-SA Obligations*” – means the *Contractor’s ASGI-SA Obligations* under and as defined in the Contract.
 - 1.6 “*Employer*” - means Eskom Holdings Limited, a company registered in accordance with the laws of the Republic of South Africa under Registration Number 2002/015527/06.
 - 1.7 “Expiry Date” - means the [●] day of [●] 200[●]; *[Drafting Note: anticipated date of issue of ASGI-SA Performance Certificate to be inserted.]*
 - 1.8 “Guaranteed Sum” - means the sum of R [●] ([●] Rand);
 - 1.9 “Project” – means the
2. At the instance of the *Contractor*, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of the *Employer*, as security for the proper performance by the *Contractor* of the *Contractor’s ASGI-SA Obligations* and hereby undertake to pay to the *Employer*, on written demand from the *Employer* received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.

3. A demand for payment under this guarantee shall be made in writing at the Bank's address and shall:
 - 3.1 state the amount claimed ("the Demand Amount");
 - 3.2 state that the Demand Amount is payable to the *Employer* in the circumstances contemplated in the Contract.
4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank's obligation/s to make payment:
 - 4.1 is and shall be absolute provided demand is made in terms of this bond in all circumstances; and
 - 4.2 is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.
5. The Bank's obligations in terms of this Guarantee:
 - 5.1 shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
 - 5.2 shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between the *Employer* and the *Contractor*.
6. The *Employer* shall be entitled to arrange its affairs with the *Contractor* in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the *Contractor* or any variation under or to the Contract.
7. Should the *Employer* cede its rights against the *Contractor* to a third party where such cession is permitted under the Contract, then the *Employer* shall be entitled to cede to such third party the rights of the *Employer* under this Guarantee on written notification to the Bank of such cession.
8. This Guarantee:
 - 8.1 shall expire on the Expiry Date until which time it is irrevocable;
 - 8.2 is, save as provided for in **7** above, personal to the *Employer* and is neither negotiable nor transferable;
 - 8.3 shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
 - 8.4 shall be regarded as a liquid document for the purpose of obtaining a court order; and
 - 8.5 shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the courts of the Republic of South Africa.
 - 8.6 Any claim which arises or demand for payment received after expiry date will be invalid

and unenforceable.

9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____

Date _____

For and behalf of the Bank

Bank Signatory: _____

Bank Signatory: _____

Witness: _____

Witness: _____

Bank's seal or stamp

PART 2: PRICING DATA
ECC3 Option A

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option A	
C2.2	The <i>activity schedule</i>	

C2.1 Pricing assumptions: Option A

1. How work is priced and assessed for payment

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

Identified and defined terms 11
11.2

(20) The Activity Schedule is the *activity schedule* unless later changed in accordance with this contract.

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

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

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

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

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

2. Function of the Activity Schedule

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

3. Link to the programme

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

4. Preparing the *activity schedule*

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

The *Employer*, in his Instructions to Tenderers or in a Tender Schedule, may have listed some

items that he requires the *Contractor* to include in his *activity schedule* and be priced accordingly.

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

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

An activity schedule could have the following format:

Item No.	Programme Reference	Activity description	Price

C2.2 the *activity schedule*

Use this page as a cover page to the *Contractor's activity schedule*.

PART 3: SCOPE OF WORK

Document reference	Title	No of pages
	This cover page	1
C3.1	<i>Employer's Works Information</i>	
C3.2	<i>Contractor's Works Information</i>	
	Total number of pages	28

PART C3: SCOPE OF WORK

2

C3 ECC3 COVER PAGE

C3.1: EMPLOYER'S WORKS INFORMATION

Contents

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1 Description of the works

1.1 Executive overview

The *works* involve the design, supply and installation of the complete Jagersrust potable water pipeline, reticulation piping to Jagersrust houses and the refurbishment of the existing reservoirs within the vicinity of the Drakensberg Power Station.

The capability of the water pipeline has to provide potable water via the main piping system into reservoirs for consumption by the town of Jagersrust.

The Jagersrust pipeline spans from the Jagersrust water treatment plant to the reservoirs, from the reservoirs to the town of Jagersrust.

The Scope of the Work includes the following:

- Design a new potable water supply pipeline and reticulation piping to the houses. This includes the assessment of the existing network and the associated infrastructure.
- Replace and re-route all pipelines with new.
- Install new pipe supports, thrust blocks where required, restraints and other ancillary work necessary for a complete water pipeline and reticulation system.
- Replace all valves, water meters, accumulators and fire hydrants with new.
- Refurbish existing reservoirs and install a chlorine monitoring system.
- Replace all asbestos pipelines with new pipelines.
- Maintenance schedule to be drawn up to ensure expected life of the pipelines, valves and reservoirs.
- Testing and commissioning of the water pipeline and reticulation system.

1.1.1 Existing Plant / System Description

The existing Jagersrust potable water pipeline and reservoirs was constructed approximately forty years ago. It treats water from the Tugela-Vaal system and pumps the potable water via the main water line piping system into reservoirs for consumption by the surrounding villages and resorts. The water pipeline runs in a southerly direction and a section of the piping approximately 30m from the water treatment plant is supported on plinths and spans a wetland.



Figure 1:

The pipeline consists of approximately 1500m of 150mm \varnothing galvanised mild steel lines supported on plinths. The town of Jagersrust has approximately 700m of 100mm \varnothing asbestos pipe line and 1500m of 80mm \varnothing and 100mm \varnothing distribution pipelines. There is a concrete Potable Water Reservoir and a second larger Braithwaite Potable Water Reservoir tank. The pipeline starts at the raw water dam supplying the water treatment plant. The treated water, supply the reservoirs and is distributed to the Jagersrust development.



Figure 2 : Proposed Main Water Pipeline

1.2 Employer's objectives and purpose of the works

The *Employer's* objective and purpose of the *works* is to ensure that the capability of the water pipeline provides continuous, sound and uncompromising potable water supply via the main piping system into reservoirs. From the reservoir the potable water is distributed for consumption by the surrounding villages and resorts.

1.3 Interpretation and terminology

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
AFC	Approved For Construction
DTM	Digital Terrain Model
KKS	Kraftwerk Kenzeichnungen System
PQP	Project Quality plan
QA	Quality Assurance
QCP	Quality Control Plan
RAM	Reliability, Availability and Maintainability
SANS	South African National Standard
WTW	Water Treatment Works
OBL	Outside battery limits

2 Management and start up

2.1 Management meetings

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 are submitted to the *Project Manager* by the person convening the meeting within five days of the meeting.

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

2.2 Documentation control

- All contractual communications are through formal compiled letters or forms on the company's letterhead.
- The formal letters and or forms are attached to e-mails and not as a message in the e-mail itself.

- The receiver of the formal letters or forms signs off an acknowledgment of receipt of the communication and returns the acknowledgement of receipt to the sender of the formal communication.

2.3 Health and safety risk management

- The Contractor complies with the health and safety requirements contained in Annexure A to this Works Information.

2.4 Environmental constraints and management

- Eskom's goal is to ensure zero harm to the environment, and to ensure than any possible impact is mitigated or managed. The Duty of Care and implementation of best practice is critical during operations, and full communication on environmental issues is required at all times.
- All processes are be subject to environmental review throughout the contract.
- The *Contractor* complies with all National and Local legislation requirements as well as Eskom procedures and policy.
- The following applies to promote Eskom's goal of zero harm to the environment:
 - Respect and care for the natural environment and for each other.
 - Minimise or mitigate any impacts that may cause harm or pollution to the environment.
 - Report immediately an environmental incident requiring action, such as a spill.
- The *Contractor* develops a method statement/ operational plan for the management of waste material that is accepted by the *Project Manager* before site implementation.
- The method statement on waste management includes the identification of possible waste streams, temporary storage and disposal options for each waste type, and contingency plans in the case of any environmental incident.
- The method statement on waste management includes / specifies:
 - Demarcated storage areas are located in such a manner that it can provide optimum handling and transportation of waste material.
 - Stored in suitable labelled containers or drums / sealed if hazardous in bunded areas or spill platforms to prevent pollution or harm to the environment.
 - Duty of care and implementation of best practise.
- The *Contractor* provides Safety Data Sheets for all chemical or hazardous / potentially hazardous material brought onto site.

2.5 Quality assurance requirements

- The quality requirements are as per ISO 9001:2015 and as per Eskom document 240-55944466, Supplier Contract Quality Requirements for Engineering and Construction Work and 240105658000, Supplier Quality Management: Specification.
- The programming of inspections, hold and witness points is agreed between the *Employer* and the *Contractor* prior to undertaking any work.
- The *Contractor* defines the level of QA/QC or inspection imposed on his subcontractors and suppliers.
- All technical design; implementation documentation and PQP are submitted to the *Employer* for acceptance prior to the *works*.
- The *Contractor* is made aware that all documents or designs submitted for review to the *Employer* for Acceptance, requires a process of review.

2.6 Programming constraints

- The *Contractor* submits a bar chart programme in MS Project format, detailing how the *works* is executed within the stipulated dates.
- The programme indicates the starting date, Completion Date and duration of each activity.

2.7 Contractor's management, supervision and key people

- The *Contractor* provides the necessary personnel resources to complete the *works*.
- The *Contractor* submits a detailed organogram of people within as well as outside of the working area, with clear lines of communication and authority, to the *Project Manager*
- The *Contractor* submits the CV's of all personnel to the *Project Manager*
- The *Contractor* does not modify any plant or materials unless accepted by the *Project Manager* prior to implementation.
- The *Contractor* is liable for repair of any damages caused to plant or material by his own doing.
- The *Contractor* notifies the *Project Manager* at least two days in advance of a Hold or Witness point on the *works*.
- The *Contractor* does not operate any Equipment on Site, unless specific authorisation is obtained from the *Employer*.
- The *Contractor* makes arrangements for the use of the available workshop Equipment and Site specific tools.
- The *Contractor* may be requested by the *Project Manager* to submit details of the qualifications and experience for each category of personnel and specialists for which a rate is submitted.

2.8 Invoicing and payment

- Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* submits a tax invoice to the *Employer*, showing the amount due for payment equal to that stated in the *Project Manager's* payment certificate.
- The *Project Manager* to be copied in on all electronic invoices emailed.
- Failure to submit the invoice to the correct address could result in delays in payment.
- The *Contractor's* Tax Invoices comply with the requirements as stated in clause Z7 of the Contract Data
- Invoices are submitted electronically to:
 - Local Eskom Invoices - invoiceseskomlocal@eskom.co.za
 - Foreign Eskom Invoices - invoiceseskomforeign@eskom.co.za
- Details required when submitting invoices and additional data:
 - The subject line on your email should only contain your vendor number
 - Each invoice in PDF should be named with your invoice number only
 - All electronic invoices are be sent in PDF format only
 - Attach the proof of delivery to your invoice
 - Where applicable, supporting documents are be attached to the scanned PDF invoice as one ☐ attachment
 - A copy of the signed assessment certificate
 - CPA calculation sheet
 - Retention Certificate where it is a retention invoice ☐ Any other appropriate documents, e.g.
 - For shipping invoices, please ensure the following documents are attached
 - Invoice (this should only reflect the shipping cost)

- Commercial invoice
- Delivery note
- Your shipping costs calculation relevant to that invoice – not a generic calculation (The amount of the shipping costs calculation balances on the amount on the invoice.)
- Forwarding agent's invoice
- The customs document
- Please do not attach unnecessary documents as this will make the file too large g) Other requirements:
 - For foreign invoices, suppliers are still required to physically deliver hard copies of original documents to the respective Document Management centres even though the invoices have ☐ been submitted electronically
 - Ensure compliance with the tax requirements for submitting invoices electronically
 - Each PDF should contain one credit note, one debit note or one credit note only. More than ☐ one invoice can be submitted per email
 - Any CPA applicable are be invoiced separately, so that if there are issues on the CPA, the rest of the invoices can be paid while the CPA issues are resolved
- h) Include the following information on the Invoice:
 - Name and address of the *Contractor* and the *Project Manager*;
 - The contract number and title;
 - *Contractor's* VAT registration number;
 - The *Employer's* VAT registration number 4740101508;
 - Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
 - *Contractor's* company registration number if applicable
 - *Contractor's* banking details
 - Name and address of recipient
 - Tax invoice number and date of issue,
 - Description of goods/service provided,
 - Quantity or volume of goods/services
 - Period time for which the Tax Invoice is being rendered,
 - Relevant Task Order Number (commencing with a 45 prefix),
 - Relevant line item number,
 - Statement whether value added tax is included or excluded

2.9 Insurance provided by the *Employer*

- Insurances required for this contract is managed in accordance with clause 8 of the core clauses in TSC3.

2.10 Contract change management

- Contract change management is managed in accordance with clause 6 of the core clauses in TSC3.

2.11 Provision of bonds and guarantees

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

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

The *Contractor* provides the bonds and guarantees as agreed to within 2 weeks after the Contract Date.

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

In order to substantiate the Defined Cost of compensation events, the *Employer* requires the *Contractor* to keep records of amounts paid by him, in the following format:

Type of cost	Type of Record
People employed by the <i>Contractor</i> (labour)	Signed timesheets and payslip
Accommodation	Paid invoices
Materials	Register and paid invoice of materials used
Equipment	Register and paid invoice of Equipment used

2.13 Training workshops and technology transfer

Not Applicable.

3 Engineering and the *Contractor's* design

3.1 *Employer's* design

The existing Jagersrust potable water pipeline and reservoirs was constructed approximately forty years ago. It treats water from the Tugela-Vaal system and pumps the potable water via the main water line piping system into reservoirs for consumption by the surrounding villages and resorts. The water pipeline runs in a southerly direction and a section of the piping approximately 30m from the water treatment plant is supported on plinths and spans a wetland.

The pipeline consists of approximately 1500m of 150mm ø galvanised mild steel lines supported on plinths. The town of Jagersrust has approximately 700m of 100mm ø asbestos pipe line and 1500m of 80mm ø and 100mm ø distribution pipelines.

Sections of the over land pipeline revealed severe corrosion damage in the form of through wall pitting of the piping. Approximately 500m from the wetland area, the embedded pipeline is exposed and reveals a failed piping joint. Approximately 1100m from the wetland area, the embedded pipeline is exposed and reveals severe corrosion damage in the form of through wall pitting of an elbow or bend section. Approximately 1150m from the wetland area, the embedded pipeline is exposed and runs into a tunnel located underneath a service road and water culvert. The piping in this section is severely corroded. The piping protruding from the ground into the tunnel shows water leaking and the bends entering and exiting the tunnel are cladded with plate clamps where corrosion damage has caused through wall failures of the piping.

There is a concrete Potable Water Reservoir and a second larger Braithwaite Potable Water Reservoir tank. This main water line piping system is the bulk supply to the reservoirs.

The concrete Potable Water Reservoir appears intact and free from any damage. The second larger Braithwaite Potable Water Reservoir tank appears sound and intact but shows signs of localised rust staining on the panels. Four separate areas where bolt heads appear in the panels are severely corroded.

The final distribution line consists of 80 NB stainless steel 304 which feeds into two galvanised mild steel lines (100 NB and 150 NB). Rust patches are forming on the pipeline and flanged joints. The steel pipeline has reached its end of life, experiencing failures, breakages and leakages and must be replaced.

Leaks are evident in the water distribution pipeline to the town of Jagersrust as well as within the town from the reservoir. These distribution pipes are mainly asbestos.

The *works* involve the assessment, design and replacement of the complete Jagersrust potable water pipeline. This includes refurbishing the existing reservoirs.

The capability of the water pipeline has to provide potable water via the main piping system into reservoirs for consumption by the town Jagersrust. A reservoir chlorine analysing system is to be installed and be interfaced with the existing system.

The Jagersrust pipeline spans from the Jagersrust water treatment plant to the reservoirs, from the reservoirs to the town of Jagersrust.

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

The *Contractor* is responsible for the design of the *works* by assessing the existing plant and performs all required design changes.

The Civil Engineering scope includes:

- Topographical Survey
- Geotechnical Study
- Design (Design document, full set of drawings, scope of work, technical specifications,)
- Construction
- Deliverables

3.2.1 Topographical Survey

The *Contractor* performs a topographical survey of the existing reticulation pipeline from the water treatment plant up to the reservoirs. Continuing from the reservoirs to the town of Jagersrust, to include the reticulation piping within the town of Jagersrust.

The surveyor is required to carry out the services as governed by the South African Council for Professional and Technical Surveyors (PLATO Act 40 of 1984 as amended).

The surveyor performs a topographical survey in accordance with the Land Survey Act, Act No 8 of 1997, and the Survey Regulations, as amended.

The surveyor is required to provide the services as listed below: (The surveyor provides the data required for the design and works as required by the the Design Engineer)

1. Collection and collation of topographical information for the area.

- The surveyor is required to collect all data describing the site boundaries and servitudes registered over all properties covering the site.

- Methods and work procedures is submitted to the Project Manager before any work starts.

2. Identification or establishment of survey beacons

- Identification and protection of existing beacons for use in survey reference.
- Establishment of new beacons within survey area for survey purposes where existing beacons are insufficient or do not exist.

3. Field work – Surveying

- The survey is based on the LO-System WGS84 reference system of the national triangulation. Specifications and accuracy are in accordance with the requirements of TMH 11: Standard Survey Methods.
- A survey of the area for the proposed water pipeline is performed by a qualified surveyor taking into consideration the fact that the actual pipeline may be situated anywhere within the allocated servitude. The surveyor must locate the existing services within the site area.
- The surveyor ensures that there are a sufficient number of benchmarks as well as surveyed points to establish a detailed contoured surface in order to complete design.
- The survey also identifies the position of existing servitudes. This includes but not be limited to culverts, kerbs, manholes, telephone servitudes, sewer servitudes, potable water servitudes, electrical lines, fences, gates, watercourses, existing infrastructure, road reserve boundary, etc.
- The survey is provided as a set of labelled co-ordinated points (label y, x, z).
- The surveyor provides a full list of actual descriptions used.

4. Mapping and production of detailed survey drawings.

- The digital terrain model consists of ASCII files stored on disc/hard drive and submitted to the Project Manager.
- The design files of the package used when the DTM was generated is also provided to the Project Manager.
- Separate files are provided for spot heights and for detail points or it must be clearly separated when contained in one file.
- The surveyor supplies a list explaining the point description codes together with the DTM.
- One master drawing (incorporating all survey layout plans) is supplied to the Project Manager on CD/hard drive in DWG and DXF formats.
- The contour interval required is 0.5m for ground slopes less than 10% and 1.0m for ground slopes in excess of 10%.
- The grid spacing is 100m.
- Only points indicating details that are on ground level can be used for contouring and are to be included as “Layer 1”. The Survey control pegs must be provided as “Layer 2” and the remaining information e.g. manhole positions, on other layers.
- The survey points must include features so as to be able to determine existing road surface widths, road levels, culvert and pipe inlet and outlet levels, stream beds, drainage paths, side drains, drainage structures, services and manholes.
- The digital information is provided on a CD/hard drive.

3.2.2 Geotechnical Study

- The geotechnical consultant performs a desk study review of all known services, existing geotechnical information and regional information available for the existing pipeline and associated foundation soils in the area. The supervision of the work in the field must be the

full-time responsibility of a suitably qualified and experienced geotechnical engineer (ECSA registered) as appointed as part of the *Contractor's* team to supervise test work on site.

- The *Contractor* performs a detailed geotechnical study of the proposed pipeline route for the design of the system.
- The scope of services includes a geotechnical subsurface investigation using soil borings to determine subsurface soil conditions and stratification.
- Information obtained from the subsurface exploration and from subsequent laboratory testing is to be incorporated into a geotechnical engineering analysis.
- This analysis evaluates the stability of the in-situ soil and its capacity to support the proposed *works* features.

3.2.3 Design

- Design of all civil and structural components for a fully functional potable water supply pipeline from the source of water to the consumer.
- The *Contractor* is responsible for the design of the *works*. The *Contractor* is to assess the existing site and plant and performs all required design and design changes to meet the objective of the project.
- The design must interface with the current civil infrastructure and various items of mechanical and electrical plant.
- The design is carried out by the *Contractor's* professional structural and Civil Engineers/Technologists who are registered with the Engineering Council of South Africa. The *Contractor's* structural engineer provides design certification in accordance with SANS 10400-A, declaring the design "fit for purpose" in terms of the relevant design codes and the OHS Act. The designs are in accordance with the latest relevant SANS codes, standards and specifications. The *Contractor* ensures that all designs are signed off by a respective Engineering Council of South Africa (ECSA) registered Professional Engineer/ Technologist PR Eng or Pr Tech Eng).
- The pipeline is to have a minimum design life of 25 years.
- Design a new potable water supply pipeline. This includes the sections from the raw water dam to the water treatment plant, pipeline to the reservoirs and the reticulation piping and plumbing to Jagersrust houses.
- Design to include detailed design report, drawings and a detailed method statement.
- Technical Report detailing the Scope of Work and Specifications for refurbishment of the water tanks/reservoirs. A proposed route of the new pipeline has been established (see Figure 1). The *Contractor* may propose an alternative route.
- The potable water supply pipeline commences at the raw water dam to the Jagersrust Water Treatment Plant, to the reservoirs and feeding into the Jagersrust housing development.
- The pipeline includes all concrete pipe supports, thrust blocks if required, restraints and other ancillary work necessary for the pipeline.
- The expected pipeline delivery flowrate output is the maximum of WTW (90m³/hour).
- Maximum pipeline velocity. This would depend on the material selected, but 3.0 m/s is suggested for galvanized steel. The delivery capability of the WTW and pipeline head loss is also considered when selecting the pipe diameter.
- Pipeline and all installed components are designed and selected for the maximum pump delivery pressure at zero flow (i.e. pumping against a closed valve). Pressure test to be conducted at 1.5 times the design pressure.
- Pipe supports and thrust blocks need to be designed and installed to prevent strain on the pipes and components. Allowance for pipe expansion needs to be considered.
- The pipeline requires corrosion resistant properties in accordance with the 240-100945498 Standard for Corrosion Protection of Coastal Gas Generation Plant and Equipment with Coatings and 240-101712128 Standard for the internal Corrosion Protection of Water Systems, Chemical Tanks and Vessels and Associated Piping with Linings.

- The final pipeline route is accepted by the *Project Manager*.

3.2.4 Design Documentation Deliverables

The *Contractor* submits documentation for acceptance by the *Project Manager*, including but not limited to the following items:

3.2.4.1 Phase 1: Investigation

- Geotechnical investigation as per SANS report.
- Topographical survey of the existing reticulation pipeline from the Raw Dam, Water Treatment Plant up to the reservoirs. Continuing from the reservoirs to the town of Jagersrust, to include the reticulation piping network within the town of Jagersrust. The topographical survey is performed as required by the Design Engineer.

3.2.4.2 Phase 2: Concept Design

- Civil Engineer report indicating proposed pipeline routing and layouts.
- The pipeline includes all concrete pipe supports, thrust blocks if required, restraints and other ancillary work necessary for the pipeline. The concept design to be approved by the *Project Manager*.

3.2.4.3 Phase 3: Detail Design

- Civil Engineer Design indicating final pipeline routing and layout, cross sections, pipe connection details, thrust blocks, position of valves, water meters, fire hydrants, chambers, marker blocks, stand pipes etc. This includes detailed specifications and work procedures for all systems within the water supply network.
- Design to show final pipeline route from the water treatment plant (including the section from the raw water dam to the WTP) to the reservoirs, from the reservoirs to the town of Jagersrust.
- Drawings - Plan layout, Pipe layout, Pipe details, Typical sections, Connection details, Concrete details, Reinforcing details.
- Detailed method statement.
- Technical specifications of all new materials and equipment.

3.2.4.4 Pre-implementation Documentation

The *Contractor* provides the following for acceptance by the *Project Manager*, prior to implementation:

- Geotechnical report
- Topographical survey
- Detailed design as per the design requirements detailed in Section 3.4
- Method Statements
- Quality Control Plans and Check Sheets
- Installation Procedures
- Testing Procedures
- A Corrosion Protection Specification for any coating that needs to be performed.
- A technical programme in Microsoft Project format and in PDF format.

3.2.4.5 Post-implementation Documentation

The *Contractor* provides the *Project Manager* with Instruction/Technical/Operating and Maintenance Manuals that includes:

- As-built drawings in DWG Format and PDF. The specific KKS code of each component to appear on all drawings.
- Signed-off test certificates
- Signed-off Quality Control Plan and Check sheets
- Operating and Maintenance Manual including the following:
- Operating instructions (start-up check list)
- Fault finding and maintenance instructions supported with a fault tree.
- Maintenance plan
- List of recommended spares

3.2.5 Construction

- Detection, verification and adjustment/diversion of existing services.
- Site clearance and protection of existing services.
- Manage and accommodate traffic for the existing road users and residents during execution of the *works*.
- Maintain water supply to Jagersrust village and all other users.
- Maintain temporary water supply from reservoirs to Jagersrust. Water interruption to reservoirs should be less than a period of 5 hours.
- Install new potable water supply pipeline as per the scope of work.
- Refurbishment of existing water storage reservoirs to include required pipeline connections which is dependent on the final approved design.
- Install new potable water supply pipeline at identified location in Jagersrust.
- Install a reservoir chlorine analysing system to be supplied by Eskom.
- Construct new valve chambers, install new valves, pressure sustaining valves and flow meters where indicated.
- The *Contractor* performs pressure and leakage tests on the completed work. All work to be pressure tested before taken into use in accordance with SANS 1200 L.
- Reinstatement of road surfaces complete with all courses, kerbs and all other surfaces and services affected by the *works*.
- The *Contractor* informs the *Project Manager* timeously of any disruptions to property owners, residents and authorities during the execution of the *works*.
- *Contractor* to co-ordinate and plan the tie in of the water pipeline system and connections to the houses with the *Project Manager*.
- The *Contractor* will be required to manage construction activities in accordance with the method statement and QCP to ensure compliance of all construction work and construction materials to specifications and quality requirements in section 4.3.1
- The *Contractor* ensures that the site is clean and tidy during the *Works*.

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

3.3.1 Process for Submission of Documents

The process for the submission of documents is described below and applicable to the Design review:

- The *Contractor* submits the documents/drawings to the *Project Manager*.
- The *Employer's* project team reviews the documents/drawings and submits all comments or inputs to the *Project Manager*. The *Project Manager* submits to the *Contractor* for consideration/correction.

- The *Contractor* revises the documents/drawings and resubmits to the *Project Manager*.
- The *Employer* and the *Contractor* conducts a design review.
- The *Contractor* corrects the deviations arising from the design review.
- The *Project Manager* accepts the *Contractor's* design.

3.3.2 Time Required for acceptance of Design

- The *Contractor* notes that a design review by the *Employer* takes two(2) to four(4) weeks.
- The *Project Manager* returns one copy of the drawing marked "Accepted"; "Accepted as Noted" or "Not Accepted", as may be appropriate. The notations "Accepted" and "Accepted as Noted" authorize the *Contractor* to proceed with the manufacture of the Plant covered by such drawings subject to the corrections, if any, indicated thereon.
- Where prints or drawings have been "Not Accepted" or "Accepted as Noted" the *Contractor* makes the necessary revisions on the drawings and submit further copies for acceptance in the same procedure as for the original submission of drawings. Every revision shows by number, date and subject in the revision block on the drawing.

3.4 Other requirements of the *Contractor's* design

None.

3.5 Use of *Contractor's* design

- The *Employer* may use and copy the *Contractors* design for any purpose connected with construction, use, alteration or demolition of the *Works*.
- The *Employer* has total rights to use the design as the *Employer* requires. The *Contractor* notes that all drawings and other documentation supplied to the *Employer* become the property of the *Employer* upon completion of the *Works*.
- The *Employer* uses the *Contractor's* Copyright Documents and all intellectual property rights relating thereto for the sole purpose of all its needs at Drakensberg Pump Storage Scheme, which includes any *Employer* processes and procedures pertaining to use, maintenance, operation, construction, retrofit, refurbishment, upgrade, repair or demolition of the *Works*.
- The *Employer* may copy and submit, without restriction, all documentation to others employed or contracted by the *Employer* who has duly signed a confidentiality agreement with the *Employer*.
- The *Contractor* may not use any Copyright Documents (and the copyright therein and all intellectual property rights relating thereto), which are owned by the *Employer* and/or *Others* and provided to the *Contractor*, for any other purpose than to Provide the *Works*. The *Contractor* may not copy and therefore not retain copies of any such Copyright Documents. At Completion of the whole of the *Works*, or earlier termination, the *Contractor* returns to the *Employer* all such documentation provided to him by the *Employer* and/or *Others*.

3.6 Design of Equipment

The *Contractor* designs and executes the *works* in accordance with the requirements stated in this Works Information and all specifications and standards referenced herein.

3.7 Equipment required to be included in the works

None.

3.8 As-built drawings, operating manuals and maintenance schedules

3.8.1 Documentation requirements

- All documentation and drawings standards to comply with the latest Eskom's Engineering Drawing Standard Common Requirements, 240-86973501 rev1; 240-54179170: Classification and designation of technical documentation and Documentation Management Standard, 32-644 rev1 and respectively.
- The documentation and drawings supplied is in South African English and SI units are used.
- The *Employer* does not accept scanned electronic copies of documentation or drawings; however the original documentation with signature is scanned for electronic purposes.
- The documentation is submitted in loose leaf binders to ISO format and normally A4 size. The use of oversize pages is kept to a minimum and does not exceed page height of an A4 unfolded. Fixings are "D" ring and are of the snap close type. Post binders or other fixings are not acceptable. Binders do not exceed 80 mm in overall thickness. The document identity appears on both the front cover and on the spine.
- Documentation are of good quality, prepared by suitably qualified personnel and contain the general arrangement drawings, installation drawings and instructions, operating and maintenance instructions for all components.
- Detailed parts lists are accompanied by exploded view type drawings clearly detailing the part, technical descriptions of the plant and material and component parts, spare part ordering instructions and type test certificates.

3.8.2 Post-implementation Documentation

The *Contractor* provides Instruction/Technical/Operating and Maintenance Manuals that includes:

- As-built drawings
- Signed-off test certificates
- Signed-off Quality Control Plan and Check sheets
- Operating and Maintenance Manual including the following:
- Operating instructions (start-up check list)
- Fault finding and maintenance instructions supported with a fault tree.
- Maintenance plan
- List of recommended spares
- The final issues of all manuals and drawings are submitted within 60 days after Completion for acceptance by the *Project Manager*. Photo-stat copies are unacceptable.
- All final revisions of drawings are marked "As-Built"

4 Procurement

4.1 People

4.1.1 Minimum requirements of people employed on the Site

- The *Contractor* ensures that all on-site personnel that are of not RSA nationality or permanent residence have the relevant permit to work. The *Contractor* ensures that there are at all times sufficient suitably qualified, experienced and skilled staff to carry out and supervise all activities.

4.1.2 BBBEE and preferencing scheme

- The *Contractor* complies with and fulfils the *Contractor's* obligations in respect of the Broad Based Black Economic Empowerment (as per clause Z3) and Supplier Development and Localisation Obligations.

4.2 Subcontracting

4.2.1 Preferred subcontractors

None.

4.2.2 Subcontract documentation, and assessment of subcontract tenders

- The *Contractor* makes use of the NEC suite of contracts for contracting with Subcontractors. All subcontractors are subject to the *Project Manager's* acceptance.

4.2.3 Limitations on subcontracting

None.

4.2.4 Attendance on subcontractors

- The *Contractor* includes all his subcontractors on the Site organogram, depicting all the resources on site and their lines of authority and communication.

4.3 Plant and Materials

4.3.1 Quality

- The *Contractor* notifies the *Employer* of any proposed changes to the quality management system that will affect the contract quality requirements, prior to implementing such changes.
- Quality control procedures (QCP's) are submitted by the *Contractor* for the *Project Manager's* acceptance.
- All NDT works complies with 240-83539994 Standard for Non-Destructive Testing (NDT) on Eskom Plant.
- All NDT works meets the requirements on 240-87660096 Eskom Qualification Requirements for non-destructive testing.
- All welding to be done in accordance to 240-106628253 Standard for Welding Requirements on Eskom Plant and all the latest standards contained in this standard and to be presented by the *Contractor* for *Project Manager's* acceptance. The *Contractor* submits all welding procedures and specifications of the *Works* to the *Employer* for acceptance.

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

None.

4.3.3 Contractor's procurement of Plant and Materials

- The *Contractor* ensures all Plant and Material supplied are adequately packaged and crated for transportation and delivered to Drakensberg Pump Storage Scheme.
- The *Contractor* ensures prior to installation that the Plant and Material materials delivered are not damaged during delivery to site.
- The Plant and Material is protected against any damages during storage, loading and transportation. Crates are clearly marked on the outside as to the specific contents.

4.3.4 Spares and consumables

- Spares and consumables to be readily and locally available.
- The *Contractor* submits an itemised list of any additional spares and accessories recommended for maintenance purposes of the water pipeline with the following information as a minimum:
 - Description
 - Quantity
 - Cost
 - Lead time
 - Universal (or not)

4.4 Tests and inspections before delivery

Not Applicable.

4.5 Marking Plant and Materials outside the Working Areas

Not Applicable.

4.6 Contractor's Equipment (including temporary works).

- The *Contractor* ensures that any sophisticated or highly specialised Equipment that is required in order for him to complete the *works* is put forward on notice to the *Employer* and is procured by the *Contractor*.
- Suitable lifting Equipment is used for off-loading and loading.

4.7 Cataloguing requirements by the Contractor

Not Applicable.

5 Construction

5.1 Temporary works, Site services & construction constraints

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

- Before work starts on Site, a Site inaugural meeting is held between the *Contractor* and the *Employer*, where details of the *works* are discussed and clarified;
- The *Contractor's* Site supervisor is on Site for the entire duration of the *works*.
- General access to the power station is controlled and Site induction has to be completed before work will be allowed to start.
- It is mandatory that the *Contractor* adheres to all security regulations in force during the period of the contract.

- Before entry to the Site will be allowed, everyone will undergo an alcohol breathalyser test which needs to be passed. This is one of the five Life-saving Rules to which the *Contractor* is required to adhere to at all times.

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

- The *Contractor* satisfies himself and complies with the Site conditions presented during induction.
- The *Contractor* is required to comply with all Site restrictions pertaining to the Site's roads, walkways and barricades.

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

Normal working hours are as follows:

- Monday to Thursday
07:00 – 16:15
- Fridays
07:00 – 12:00

5.1.4 Health and safety facilities on Site

- The health and safety facilities on Site will be discussed in detail during the Site induction.

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

Not Applicable.

5.1.6 Title to materials from demolition and excavation

The *Contractor* has no title to plant and/or materials resulting from him carrying out the *works*.

5.1.7 Cooperating with and obtaining acceptance of Others

Not Applicable.

5.1.8 Publicity and progress photographs

- No notice boards, advertising rights, media relations, photography and progress photographs will be allowed without appropriate authorisation.

5.1.9 Contractor's Equipment

- The *Contractor* provides the *Project Manager* with a complete list of materials, tools, Equipment and or machinery before bringing it onto Site.
- The *Contractor* provides and maintains all tests and measuring Equipment required for all tests to the required accuracy. The accuracy of test Equipment is required to be better than ± 0.1 %.
- The type and class of Equipment used is subject to the Acceptance by the *Employer*.
- The *Contractor's* measuring Equipment is accompanied by valid calibration certificates from an approved laboratory for all Civil Engineering related *Works*.
- The *Project Manager* may at any stage during the contract require such Equipment to be checked by an approved laboratory or the South African National Standards.

5.1.10 Equipment provided by the Employer

None.

5.1.11 Site services and facilities

5.1.11.1 Electricity Supply

- All points of supply are provided in terms of availability and location.

5.1.11.2 Water Supply

- All points of supply are provided in terms of availability and location.
-

5.1.11.3 Area for Site establishment and Storage

- A storage area is indicated to the *Contractor*.
- An area for Site Establishment is indicated to the *Contractor*.
- The area allocated to the *Contractor* is reinstated to their former condition on takeover of the *works*.

5.1.12 Facilities provided by the Contractor

- The *Contractor* makes provision for accommodation, vehicles, kitchen and office space (mobile container) and Equipment etc.
- The *Contractor* removes all this equipment and waste which was generated during the installation and commissioning within 24 hours after Completion of the *works*.
- Security to the *Contractor's* storage is the responsibility of the *Contractor*.
- Telephone connections are not available. The *Contractor* makes provision for his own Telecommunication requirements.
- The *Contractor* provides all other requirements to Provide the *Works*.

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

- The *Contractor* communicates the water disruptions and amount of time of the disruption to the *Employer* during the *works*.
- The *Contractor* takes measures to ensure continuous supply of water.
- The *Contractor* plans and executes the *works* to ensure minimal water supply disruptions.

5.1.14 Survey control and setting out of the works

- Topographical survey to be done as specified in Section 3.3.1.

5.1.15 Excavations and associated water control

- Detection, verification and adjustment/diversion of existing services.
- Site clearance and protection of existing services.

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

- Detection, verification and adjustment/diversion of existing services.
- Site clearance and protection of existing services.

5.1.17 Control of noise, dust, water and waste

- The *Contractor* makes arrangements for the disposal of waste at a registered waste disposal facility. The records/disposal certificates to be provided to the *Employer*.

- Work is carried out in a Power Station environment. The *Contractor* keeps noise and dust to the minimum as practicably possible. The *Contractor* ensures proper housekeeping at all times.
- The *Contractor* arranges for the disposal of waste generated from the works. The waste to be disposed off site at an approved waste disposal facility. Records and proof of disposal certificates are provided to the *Project Manager* for record keeping.

5.1.18 Sequences of construction or installation

- All activities are performed according to the approved construction programme. In the event that changes are necessary, the revised programme to be reviewed and approved by the *Project Manager*.

5.1.19 Giving notice of work to be covered up

Not Applicable.

5.1.20 Hook ups to existing works

Not Applicable.

5.2 Completion, testing, commissioning and correction of Defects

5.2.1 Work to be done by the Completion Date

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

5.2.2 Use of the works before Completion has been certified

- After successful commissioning of the *works*, the *Employer* takes over the *works* or section of the *works* by means of a Take-over certificate.

5.2.3 Materials facilities and samples for tests and inspections

Not Applicable.

5.2.4 Commissioning

Not Applicable.

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

None.

5.2.6 Take-over procedures

None.

5.2.7 Access given by the Employer for correction of Defects

The *Project Manager* arranges with the *Employer* 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.

5.2.8 Performance tests after Completion

Not Applicable.

5.2.9 Training and technology transfer

Not Applicable.

5.2.10 Operational maintenance after Completion

Not Applicable.

6 Plant and Materials standards and workmanship

6.1 Investigation, survey and Site clearance

Title	Date or revision	Tick if publicly available
GGs 0462: Quality Requirements for Engineering and Construction Works	Latest	<input type="checkbox"/>
SANS 1200 SANS Standard Specifications for Civil Engineering Construction	Latest	<input type="checkbox"/>
SANS 10400: The application of the National Building Regulations	Latest	<input type="checkbox"/>
SANS 10400A: General principles and requirements	Latest	<input type="checkbox"/>
SANS 10400B: Structural Design	Latest	<input type="checkbox"/>
SANS 10400C: Dimensions	Latest	<input type="checkbox"/>
SANS 10400D: Public safety	Latest	<input type="checkbox"/>
SANS 10400F: Site operations	Latest	<input type="checkbox"/>
SANS 10400G: Excavations	Latest	<input type="checkbox"/>
SANS 10144: Detailing of Steel Reinforcement of Concrete	Latest	<input type="checkbox"/>
ASME B31.3-2002: Process Piping	Latest	<input type="checkbox"/>
240-106628253 Standard for Welding Requirements on Eskom Plant	Latest	*
240-100945498 Standard for Corrosion Protection of Coastal Gas Generation Plant and Equipment with Coatings	Latest	*
240-101712128 Standard for the internal Corrosion Protection of Water Systems, Chemical Tanks and Vessels and Associated Piping with Linings	Latest	*

TMH 11 Standard Survey Methods V3.0 South African Standards	Latest	<input type="checkbox"/>
Land Survey Act, Act No 8 of 1997, and the Survey Regulations	Latest	<input type="checkbox"/>
PLATO Act 40 of 1984	Latest	<input type="checkbox"/>
167A/49: Drawing and documentation standard for Contractors		*
167A/143: Drawing Office Standard		*
167A/49: Documentation Process Procedure		*

6.2 Building works

Not Applicable.

6.3 Civil engineering and structural works

Title	Date or revision	Tick if publicly available
R1010: Construction Regulations	Latest	<input type="checkbox"/>
GGG 0462: Quality Requirements for Engineering and Construction Works	Latest	<input type="checkbox"/>
240-56364545 Eskom Structural Design and Engineering Standard		<input type="checkbox"/>
SANS 1200 SANS Standard Specifications for Civil Engineering Construction	Latest	<input type="checkbox"/>
SANS 1200AH: General (Structural)	Latest	<input type="checkbox"/>
SANS 1200H: Structural Steelwork	Latest	<input type="checkbox"/>
SANS 1200 HC Corrosion Protection of Structural Steelwork	Latest	<input type="checkbox"/>
SANS 10400: The application of the National Building Regulations	Latest	<input type="checkbox"/>
Guidelines for Human Settlement Planning and Design- Red Book Volume 2	Latest	<input type="checkbox"/>
SANS 10400A: General principles and requirements	Latest	<input type="checkbox"/>
SANS 10400B: Structural Design	Latest	<input type="checkbox"/>
SANS 10400C: Dimensions	Latest	<input type="checkbox"/>
SANS 10400D: Public safety	Latest	<input type="checkbox"/>
SANS 10400F: Site Operations	Latest	<input type="checkbox"/>
SANS 10400G: Excavations	Latest	<input type="checkbox"/>

SANS 10100-1: The structural use of concrete Part 1:Design	Latest	<input type="checkbox"/> <input type="checkbox"/>
SANS 10100-2: The structural use of concrete Part 2: Materials and execution of work	Latest	<input type="checkbox"/> <input type="checkbox"/>
SANS 10144: Detailing of Steel Reinforcement of Concrete	Latest	<input type="checkbox"/> <input type="checkbox"/>
ASME B31.3-2002: Process Piping	Latest	<input type="checkbox"/> <input type="checkbox"/>
TMH 11 Standard Survey Methods V3.0 South African Standards	Latest	<input type="checkbox"/> <input type="checkbox"/>
Land Survey Act, Act No 8 of 1997, and the Survey Regulations	Latest	<input type="checkbox"/> <input type="checkbox"/>
PLATO Act 40 of 1984	Latest	<input type="checkbox"/> <input type="checkbox"/>
General Guidelines for Modelling Water distribution systems and Network analysis for Design		

6.4 Electrical & mechanical engineering works

Not Applicable.

6.5 Process control and IT works

Not Applicable.

6.6 Other [as required]

Title	Date or revision	Tick if publicly available
240-105658000 Contractor Contract Quality Requirements Specification		<input type="checkbox"/> <input type="checkbox"/>
36-681 Generation Plant Safety Regulations 36-681		<input type="checkbox"/> <input type="checkbox"/>
240-53114002 Engineering Change Management Procedure		<input type="checkbox"/> <input type="checkbox"/>
240-4332798 Engineering Policy		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
OHASA (1993) Occupational Health and Safety Act of South Africa, Act 85	1993	<input type="checkbox"/> <input type="checkbox"/>
The Compensation for Occupational Injuries and Diseases Act No.130 of 1993, amended by government notices to 30 April 2004 or Equivalent	2004	<input type="checkbox"/> <input type="checkbox"/>
National Environmental Management Act of 1988	1988	<input type="checkbox"/> <input type="checkbox"/>
ISO 9001:2008 Quality Management Systems	2008	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
240-62196227 Eskom Life-saving Rules Directive 23-421		*

240-86973501 ESKOM General documentation standard		*
32-644 Rv1 ESKOM Documentation Management Standard		*
240-54179170 Classification and designation of technical documentation		*

* Available on request.

The revisions and amendments of the above documents that apply are the latest revision and amendments in force at the time of the contract award.

This Works Information is carried out in accordance with this Specification (and with the documents listed above. Nothing in this specification lessens the *Contractor's* obligations detailed in any other documents forming part of the Contract.

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
0.48/4589	2	Water Treatment Plant Process Flow Diagram
0.48/955	9	Jagersrust Township Layout
Figure 1		Proposed Pipeline Route

* The drawings listed above are for information purposes only

PART 4: SITE INFORMATION

Document reference	Title	No of pages
C4	This cover page Site Information	2
	Total number of pages	

PART 4: SITE INFORMATION

1. General description

Drakensberg is a 1000MW Pumped Storage Scheme comprising of four reversible turbines rated each at 250MW. The station is located in the Drakensberg Mountains in Kwazulu-Natal, close to the town of Bergville. Construction and commissioning of the last units was accomplished in 1981. A special feature of the station is that it is constructed entirely underground with only a dam wall, lift shaft buildings and transmission lines visible at the surface. The Drakensberg Pumped Storage Scheme is reached from Harrismith via the R49 to Kestel. Take the R74 turn-off to Bergville some 2.8 km along the R49. Turn left after 8.7 km and travel 23.5 km to the Kwazulu-Natal / Free State boundary at the top of the Oliviershoek Pass. From there, travel 13.1 kms down the pass and turn left. Follow the sign posted directions to the power station for approximately 9.5 km. The total distance from Harrismith is approximately 60 km.

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

As viewed at the Site Meeting.