



NEC3 Engineering and Construction

Short Contract (ECSC3)

A contract between Eskom Holdings SOC Ltd (Reg No. 2002/015527/30)

and

for **Geotechnical Assessment for Existing Ash Dam Complex at Kriel Power Station**

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Documentation prepared by: [•]

C1 Agreements & Contract Data

C1.1 Form of Offer and Acceptance

Offer

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

Title of the Contract

The tenderer, identified in the signature block below, having examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, 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.

The offered total of the Prices exclusive of VAT is	R[•]
Value Added Tax @ 15% is	R[•]
The offered total of the Prices inclusive of VAT is	R[•]
(in words) [•]	

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

Signature(s)

Name(s)

Capacity

**For the
tenderer:**

(Insert name and address of organisation)

Name &
signature of
witness

Date

Tenderer's CIDB registration number:

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 1 Agreements and Contract Data, (which includes this Form of Offer and Acceptance)

Part 2 Pricing Data

Part 3 Scope of Work: Works Information

Part 4 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 Tender 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, which must be signed by the duly authorised representative(s) for both parties.

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

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the tenderer receives one fully completed and signed copy of this document, including the Schedule of Deviations (if any) together with all the terms of the contract as listed above.

Signature(s)

Name(s)

Capacity

**for the
Employer**

(Insert name and address of organisation)

Name &
signature of
witness

Date

Note: If a tenderer wishes to submit alternative tender offers, further copies of this document may be used for that purpose, duly endorsed, 'Alternative Tender No. _____'

Schedule of Deviations

Note:

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

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

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

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

For the tenderer:

For the Employer

Signature _____

Name _____

Capacity _____

On behalf of _____
(Insert name and address of organisation)

(Insert name and address of organisation)

Name & signature of witness _____

Date _____

C1.2 Contract Data

Data provided by the *Employer*

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

1. Please read the relevant clauses in the NEC3 Engineering and Construction Short Contract (April 2013) (ECSC3)¹ before you enter data. The number of the principal clause is shown for most statements however other clauses may also use the same data.
2. Where the following symbol is used "[•]" - data is required to be inserted.]

Completion of the data in full is essential to create a complete contract.

Clause	Statement	Data
General		
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 & 14.4	The <i>Employer's</i> representative to whom the <i>Employer</i> in terms of clause 14.4 delegates his actions ² is (Name):	Neo Muthavhine
	Address	Eskom Kriel Power Station
	Tel No.	Private Bag X5009, Kriel, 2271, Republic of South Africa
	Fax No.	017 615 2843
	E-mail address	086 661 2690
11.2(11)	The <i>works</i> are	Kriel Power Station Stability Assessment for Existing Ash Dam Complex
11.2(13)	The Works Information is in	the document called 'Works Information' in Part 3 of this contract.
11.2(12)	The Site Information is in	the document called 'Site Information' in Part 4 of this contract.
11.2(12)	The <i>site</i> is	Kriel Power Station
30.1	The <i>starting date</i> is.	01 February 2022
11.2(2)	The <i>completion date</i> is.	31 May 2022
13.2	The <i>period for reply</i> is	4 weeks
40	The <i>defects date</i> is	N/A
41.3	The <i>defect correction period</i> is	N/A

¹ Available from Engineering Contract Strategies Tel 011 803 3008, Fax 086 539 1902 or www.ecs.co.za

² Except those actions which can only be done by the *Employer* as a Party to the contract.

50.1	The <i>assessment day</i> is the	14 of each month.
50.5	The <i>delay damages</i> are	N/A
50.6	The retention is	0%
51.2	The interest rate on late payment is	[•]%
80.1	The <i>Contractor</i> is not liable to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property in excess of	the amount of the deductibles relevant to the event
	Does the United Kingdom Housing Grants, Construction and Regeneration Act (1996) apply?	No
93.1	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).
	Address	[•]
	Tel No.	[•]
	Fax No.	[•]
	e-mail	[•]
93.2(2)	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
93.4	The <i>tribunal</i> is:	arbitration.
	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	[•] South Africa
	The person or organisation who will choose an arbitrator	
	- if the Parties cannot agree a choice or	the Chairman for the time being or his nominee
	- if the arbitration procedure does not state who selects an arbitrator, is	of the Association of Arbitrators (Southern Africa) or its successor body.
The conditions of contract are the NEC3 Engineering and Construction Short Contract (April 2013)³⁴ and the following additional conditions Z1 to Z11 which always apply:		

³ If June 2005 Edition applies, delete April 2013 and insert June 2005

⁴ State whether attached as a 'PDF' file in terms of Eskom's licence, or to be obtained from Engineering Contract Strategies Tel 011 803 3008, Fax 086 539 1902 or www.ecs.co.za.

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

- Z2.1 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.
- Z2.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Employer* within thirty days of the notification or as otherwise instructed by the *Employer*.
- Z2.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the *starting date* the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor's* obligation to Provide the Works.
- Z2.4 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 those stated in Clause 91.1 and the amount due on termination includes amounts listed in Clause 92.1 less a deduction of the forecast additional cost to the *Employer* of completing the *works*.

Z3 Confidentiality

- Z3.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to others except where required by this contract. 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 where required by this contract the *Contractor* ensures that the provisions of this clause are complied with by the recipient.
- Z3.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Employer*.
- Z3.3 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.
- Z3.4 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 *Employer*. All rights in and to all such images vests exclusively in the *Employer*.
- Z3.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

Z4 Waiver and estoppel: Add to clause 12.2:

- Z4.1 Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties or their delegates 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.

Z5 Health, safety and the environment

- Z5.1 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.
- Z5.2 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.

Z6 Provision of a Tax Invoice and interest. Add to clause 50

- Z6.1 The *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer's* procedures stated in the Works Information, showing the correctly assessed amount due for payment.
- Z6.2 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 clause 51.2 is then calculated from the delayed date by when payment is to be made.
- Z6.3 The *Contractor* 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.

Z7 Notifying compensation events

- Z7.1 Delete from the last sentence in clause 61.1, "unless the event arises from an instruction of the *Employer*."

Z8 *Employer's* limitation of liability; Add to clause 80.1

- Z8.1 The *Employer* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand).

Z9 Termination: Add to clause 90.2, after the words "or its equivalent":

Z9.1 or had a business rescue order granted against it.

Z10 Addition to Clause 50.5

Z10.1 If the amount due for the *Contractor's* payment of *delay damages* reaches the limits stated in this Contract Data (if any), the *Employer* may terminate the *Contractor's* obligation to Provide the Works.

If the *Employer* terminates in terms of this clause, the procedures on termination are those stated in Clause 91.1 and the amount due on termination includes amounts listed in Clause 92.1 less a deduction of the forecast additional cost to the *Employer* of completing the *works*.

Z11 Ethics

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

Affected Party	means, as the context requires, any party, irrespective of whether it is the <i>Contractor</i> or a third party, such party's employees, agents, or Subconsultants 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 Subcontractors or the Subcontractor's employees,
Corrupt Action	means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,
Fraudulent Action	means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an obligation or incurring an obligation,
Obstructive Action	means a Committing Party unlawfully or illegally destroying, falsifying, altering or concealing information or making false statements to materially impede an investigation into allegations of Prohibited Action, and
Prohibited Action	means any one or more of a Coercive Action, Collusive Action Corrupt Action, Fraudulent Action or Obstructive Action.

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

Z11.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Contractor* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Employer* has. It is not required that the Committing Party had to have been found guilty, in court or in any other similar process, of such Prohibited Action before the *Employer* can terminate the *Contractor's* obligation to Provide the Services for this reason.

Z11.3 If the *Employer* terminates the *Contractor's* obligation to Provide the Services for this reason, the amounts due on termination are those intended in core clauses 92.1 and 92.2.

Z11.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Employer* does not have a contractual bond with the Committing Party, the *Contractor* ensures that the Committing Party co-operates fully with an investigation.

Z12 Insurance

Z _12.1 Replace core clause 82 with the following:

Insurance cover 82

- 82.1 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.
- 82.2 The *Contractor* provides the insurances stated in the Insurance Table A, from the *starting date* until the earlier of Completion and the date of the termination certificate.

INSURANCE TABLE A

Insurance against	Minimum amount of cover or minimum limit of indemnity	Cover provided until
Loss of or damage to the works	<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>	The <i>Employer's</i> certificate of Completion has been issued
Loss of or damage to Equipment, 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>	The Defects Certificate has been issued
The <i>Contractor's</i> liability for loss of or damage to property (except the works, Plant and Materials and Equipment) and for bodily injury to or death of a person (not an employee of the <i>Contractor</i>) arising from or in connection with the <i>Contractor's</i> Providing the Works	<p><u>Loss of or damage to property</u> <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>	

	<u>Other property</u> The replacement cost <u>Bodily injury to or death of a person</u> The amount required by the applicable law	
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	

82.3 The *Employer* provides the insurances as stated in the Insurance Table B

INSURANCE TABLE B

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

Z13 Nuclear Liability

Z13.1 The *Employer* is the operator of the Koeberg Nuclear Power Station (KNPS), a nuclear installation, as designated by the National Nuclear Regulator of the Republic of South Africa, and is the holder of a nuclear licence in respect of the KNPS.

Z13.2 The *Employer* is solely responsible for and indemnifies the *Contractor* or any other person against any and all liabilities which the *Contractor* or any person may incur arising out of or resulting from nuclear damage, as defined in Act 44 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Contractor* or any other person or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

- Z13.3 Subject to clause Z13.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Contractor* or any other person, or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.
- Z13.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 44 of 1999, or any replacement section dealing with the same subject matter.
- Z13.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z14 Asbestos

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

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

- Z14.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per

millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.

- Z14.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor's* expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z14.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.
- Z14.3 The *Employer* manages asbestos and ACM according to the Standard.
- Z14.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.
- Z14.5 The *Contractor's* personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.
- Z14.6 The *Contractor* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.
- Z14.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer's* expense, and conducted in line with South African legislation.

Data provided by the *Contractor* (the *Contractor's Offer*)

The tendering contractor is advised to read both the NEC3 Engineering and Construction Short Contract (April 2013) and the relevant parts of its Guidance Notes (ECSC3-GN)⁵ 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 page 31 of the ECSC3 April 2013 Guidance Notes.

Completion of the data in full is essential to create a complete contract.

10.1	The <i>Contractor</i> is (Name):	[•]
	Address	[•]
	Tel No.	[•]
	Fax No.	[•]
	E-mail address	[•]
63.2	The percentage for overheads and profit added to the Defined Cost for people is	[•]%
63.2	The percentage for overheads and profit added to other Defined Cost is	[•]%
11.2(9)	The Price List is in	the document called 'Price List' in Part 2 of this contract.
11.2(10)	The offered total of the Prices is [Enter the total of the Prices from the Price List]:	R[•] excluding VAT [in words] [•] excluding VAT

⁵ Available from Engineering Contract Strategies Tel 011 803 3008, Fax 086 539 1902 or www.ecs.co.za.

C2 Pricing Data

C2.1 Pricing assumptions

Entries in the first four columns in the Price List are made either by the *Employer* or the tendering contractor

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

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

All Prices are to be shown excluding VAT unless instructed otherwise by the *Employer* in Tender Data or in an instruction the *Employer* has given before the tenderer enters his Prices.

If there is insufficient space in the Price List which follows, state in which document the Price List is contained.

C2.2 Price List

The Price List is as follows / contained in _____ (delete the text which does not apply and this note)

SUBSURFACE GEOTECHNICAL INVESTIGATION FOR ASH DAM STABILITY AT KRIEL AT KRIEL POWER STATION					
Item No	Description	Unit	Qty	Rate	Amount
100	Geotechnical Investigation for Ash Dam Stability				
101	Information Review/modelling/Mapping/Reporting	Sum	1		R -
102	Borehole Drilling, Supervision and Logging including Vane shear testing	Sum	1		R -
103	DPSH testing and Test Pitting	Sum	1		R -
104	Laboratory Testing	Sum	1		R -
105	Personnel Fieldwork	Sum	1		R -
106	Disbursements (including transport, accommodation, TLB hire)	Sum	1		R -
107	Report Compilation and Review	Sum	1		R -
108	Project Management and Meetings	Sum	1		R -
	TOTAL				

C3: Scope of Work

1 Description of the works

1.1 Executive overview

Kriel Power Station is located approximately 8m west of Kriel in Mpumalanga Province, South Africa. The location is shown in Figure 1 below.



Figure 1: Kriel Power Station location

The Ash Dam complex consists of three compartments namely Dam1, Dam 2 and Dam3 which has an approximate footprint of 300Ha. The Dams are shown on the figure below



Figure 2: Layout of Ash Dams

Eskom is required to investigate the geotechnical conditions in order to monitor the Ash Dams, The geotechnical testing will also re-evaluate the shear strength parameters for the ash tailings.

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

The scope comprises of, but not limited to:

The Consultant:

- Determine the geotechnical conditions and cohesion of the existing wet ash dam complex at Kriel Power Station, and provide mitigation measures. Performs the outlined geotechnical testing to determine the shear strength parameters for the ash tailing
- Outlines the testing positions;
- Conducts the necessary fieldworks in alignment to the scope of works;
- Engages the site team/s should there be any unforeseen deviations;
- Records and presents the necessary technical information as outlined within the scope of works.

1.3 Interpretation and terminology

Abbreviation	Description
O.S.H.	Occupational Health & Safety
VWP	Vibrating wire piezometer
S.A.N.S.	South African National Standards
APP	Approved professional person
AWR	Ash water Return
ADF	Ash Dam Facility
AFC	Approved for construction
AHP	Ash Handling Plant
DWS	Department of Water and Sanitation
ECSA	Engineering Council of South Africa
EDWL	Engineering design work lead
ISO	International organization for standards
QA	Quality Assurance
QC	Quality Control
QCP	Quality Control Plan
QM	Quality Management
SHEQ	Safety health environmental quality
ROC	Required operational capability
SRD	Stakeholders requirement definition

Abbreviation	Description
VDSS	Vendor Document Submission Schedule

1.4 Interfaces with Others

The Contractor is responsible for all system interfaces which forms part of the works. The Employer provides the relevant information defining the system interfaces. The Contractor will have to liaise with Ash dam operations team to have an understanding of when the areas will be available.

2 Parts of the works which the Contractor is to perform

2.1 Scope of Works

The scope of work includes the geotechnical investigation on Kriel Ash Dams

The scope comprises of a detailed, statistically reliable geotechnical investigation of the ash and foundation soils around the existing ash dam complex at Kriel Power Station, as well as an assessment of the ash stiffness, cohesion and prevalent water table condition in the existing ash dam itself.

The geotechnical testing to be undertaken in this investigation will comprise of CPTu Probing i.e. static cone penetration tests with pore pressure determinations and Vane Shear Testing i.e. using the H-10 GEONOR vane shear equipment, or *Employer* approved alternative.

The Consultant provides all equipment and resources required to execute the *works*.

2.2 Requirements during work

The Consultant is required to:

- I. Review all relevant existing site information inclusive of existing geological and geotechnical data;
- II. For the geotechnical investigations, the Consultant will:
 - a. undertake additional Geotechnical Investigation (GI), as required, to establish the required geotechnical parameters,
 - b. drill geotechnical boreholes with SPT [Standard Penetration Tests], and implement tube sampling, at the crest of each section,
 - c. conduct DPSH [Dynamic Probe Super Heavy] tests around the perimeter of the existing ash dam complex to identify areas of poor founding conditions,
 - d. excavate test pits around the perimeter of the existing ash dam complex to confirm founding conditions,
 - e. perform laboratory testing on representative samples to establish geotechnical stability parameters for the ash and foundation soils,
 - f. prepare a comprehensive report, which will summarize geotechnical conditions of the existing ash dam complex
 - g. assist with engagement to relevant authorities (where needed),

- III. provide adequate resources including provision of equipment for required works
- IV. manage cost and a scheduled time frame of work,
- V. ensure that the scope is carried out in full,
- VI. provide regular feedback on the status of each phase,
- VII. ensure that all site work is conducted by a competent person,
- VIII. ensure that prior to any fieldwork, all parties working on site have familiarized themselves with the Employers safety requirements and the Occupational Health and Safety (OSH) Regulations act (85 of 1993) and,
- IX. ensures tests are conducted no more than 1.5m from the desired location as agreed upon with the Employer;
- X. ensures that, should the geotechnical conditions exhibit notable changes between testings, the Employer is informed promptly;
- XI. notifies the Employer, if any impedance or obstructions are encountered during intrusive field works. Notifications are done as soon as the Consultant becomes aware of them;
- XII. informs the Employer in writing of any amendments to the testing regime or if more testing is required, and ensures approval if received prior to commencement of tasks;
- XIII. ensures contractual transparency to perform best practise for the required project by employing an ethos of mutual understanding and co-operation.
- XIV. ensures all field technicians carrying out special sampling and testing, probing and field testing have the necessary training, skills and experience to conduct the works.
- XV. apply his/her discretion in conducting tests in as close an area to the desired location as possible, should access to testing areas be restricted and/or obstructed.

2.3 Contract Phases

- Employee holds a clarification meeting with the successful tender to detail any uncertainties.
- Execution of the works

2.4 Additional Requirements and Prerequisites

2.4.1 Drawings Format and Layout

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

Drawing numbers will be issued to the contractor

Drawings issued will be a minimum of one hardcopy and an electronic copy in native CAD and/or DWG/DGN format.

No drawings in TIFF or any other electronic format will be accepted.

Issued drawings will not be "Right Protected" or encrypted.

Production of As-Built information

The Contractor is required to produce as-built drawings detailing the areas where VWP's are installed

3 Construction

3.1 Construction constraints

The Contractor must ensure that works are in compliance to DWS and SANS requirements. Power Station to ensure that adequate interface management is adopted.

3.2 General

Provide the following to the Employer for review and acceptance:

- A Level 3 schedule (schedule with defined activities) for the construction scope clearly highlighting all activities involved, major milestones and provision at the concept phase.

Identify and note discrepancy or ambiguity between the Employer's Specifications or requirements. These variations are brought to the attention of the Employer for clarification within an effective allowable timeframe.

Adhere to the South African Environment Protection Act, the Waste Management Code of Practice and the South African Occupational Health and Safety Act No. 85 of 1993, the regulations promulgated thereunder and Eskom Safety, Health, Environment and Quality (SHEQ) Policy 32-727 for all works.

Adhere to the South African National Water Act 1998 (ACT NO. 36 OF 1998)

Take all necessary precautions during activities to ensure that there is no damage to existing infrastructure and/or plant.

Submit all deliverables, to be reviewed by the Employer, prior to moving on to the next phase of the project

Manage access to the working areas and the Site.

Allow adequate interface management to ensure that the activities contained within the Works does not obstruct or impose on interface projects and/or cause hindrances to general operations on site

Maintains and promotes labour harmony on the Site and in the working environment. Immediately report any potential labour disharmony to the Supervisor.

Installation includes

- Operating and Control Philosophy
- Construction management
- Engineering
- Supply
- Testing
- Signage and all the consumables required for commissioning
- Cold Commissioning
- Hot Commissioning

3.3 Geotechnical investigations

The Contractor will be provided with the geotechnical information and studies done by Others.

3.4 Fabrication and Construction

The works to be provided by the Contractor include:

- Provision of all scaffolding, site craneage, lifting equipment, etc. which are required by the Contractor.
- Excavations and drilling of all test pit areas for the project
- Construction of all earthworks and terracing required
- Corrosion protection of the steel supporting structures, embedded parts.
- Sampling of concrete test cubes and slump tests shall take place at the point of deposition.

3.5 Construction and Erection

- The Contractor takes full professional accountability and liability for all temporary items required for the execution of the Works.
- The Contractor is responsible for geotechnical testing, and all associated structures in accordance with the detailed drawings and specifications.
- The Contractor disposes of all demolition waste at a licenced waste disposal site to be accepted by the Employer. Certificates of disposal submitted to the Employer.
- The Contractor is responsible for the safety of all personnel involved in the Works as well as the safety of all personnel at Kriel Power Station affected by the construction of the Works.
- The Contractor Submits a comprehensive method statement of the Works to the Employer for acceptance prior to the commencement of the works
- The Contractor removes all temporary structures required for the execution of the works.

Waste Management

- Materials such as excess silt and water will be adequately disposed of with minimum impact to the environment.
- All demolition wastes are required to be disposed in a licenced disposal facility.

- The waste management procedure for Kriel power station is required to be complied with.
- Liaise with the Supervisor regarding the location of waste disposal sites and rubbish dumps.
- The Contractor disposes of all rubble at a waste disposal site to be approved by the Employer. The waste disposal site is selected to suit the classification of the materials to be disposed of. Certificates of disposal are required to be submitted to the Employer.
- Continuously monitor the condition in demolition areas and surrounding areas for any hazardous substances and in such case, the Contractor is required to take necessary precautionary measures.

3.6 Survey control and setting out of the works

It is the responsibility of the contractor to verify and rectify the survey information where provided. It is the responsibility of the contractor for the setting out of the works.

3.7 Excavations and associated water control

A pumping system may be required to pump excess water in areas where tests are conducted. The pump is to operate via diesel and to pump water into its natural flow path.

3.8 Sequences of construction or installation

The Employer requests that the testing in critical areas be prioritised. Interface with others is required to ensure that the works progress in a sequenced manner. The schedule milestones for phasing will be determined by the Employer and the Contractor post contract award.

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

It is the Contractor's responsibility for the detection and protection of underground and above ground services.

3.10 Materials facilities and samples for tests and inspections

The Contractor provides all materials, facilities and samples required to perform inspections, tests and commissioning as per the relevant specifications and as per the items listed under the relevant clauses of the various Sections.

3.11 Data Books

The Contractor compiles data Books progressively for all manufacturing and construction/erection inspection, operating manuals and test records and documents for every piece of plant worked on. The Contractor submits data books to the supervisor and Project Manager for their review for all equipment and works undertaken with the applicable requirements and specifications.

Apart from any statutory data packages required, the Contractor also compiles a data package of the relevant drawings, test certificates etc. to the Project Manager for acceptance. These include, but are not limited to:

Cube Strengths
Batch Plant certificates
Slump tests certificates
Compaction tests
QCP records
Material certificates
As-built data and drawings of the completed works upon handover

4 Plant and Materials standards and workmanship

4.1 Investigation, survey and Site clearance

- The contractor is responsible to check, verify and correct any survey data provided for the completion of the works.
- The contractor is responsible for setting out of the works.
- Then contractor is responsible for Site Establishment and Site Clearing and connection to any existing services that may be required. The Project Manager will inform what services are available prior to establishment.

4.2 Labour, Plant and Equipment

- Labour will be supplied by the contractor with all the required PPE and safety equipment.
 - Working hours – normal dayshift working hours is required (Overtime work up to contractor discretion)
 - Supervision – Supervisor to supervise all work activities and required. (with safety training (HIRA) to conduct risk assessments) must be full time on site
 - Operators and/or General workers will be supplied by the contractor to execute the work activities.
- Plant and Equipment will be supplied and maintained by the contractor.
- It is expected that the drilling and all other equipment is in a good and safe condition.
- All plant or equipment operators must be found competent and certified to operate equipment.

4.3 Civil Engineering and Structural Works Specifications

Number	Title
240-56364545	Structural Design and Engineering Standard
240-53113685	Design Review Procedure
240-86973501	Engineering drawing Standard – Common Requirements
240-53114026	Project Engineering Change Management
240-66920003	Documentation Management Review and Handover Procedure for Gx Coal Projects
240-76992014	Project / Plant Specific Technical Documents and Records Management

Number	Title
	Work Instruction
32-136	Contractor Health and Safety Requirements
32-245	Eskom Waste Management
240-100069100	SHE Specification
SANS 1200 AD	Standardized specification for civil engineering construction Section AD: General (Small dams)
SANS 1200 A	Standardized specification for civil engineering construction Section A: General
SANS 1200 C	Standardized specification for civil engineering construction Section C: Site clearance
<u>SANS 1200 D</u>	Standardized specification for civil engineering construction Section D: Earthworks
<u>SANS 1200 DA</u>	Standardized specification for civil engineering construction Section DA: Earthworks (small works)
SANS 1200 DB	Standardized specification for civil engineering construction Section DB: Earthworks (pipe trenches)
<u>SANS 1200 DK</u>	Standardized specification for civil engineering construction Section DK: Gabions and pitching
<u>SANS 1200 DM</u>	Standardized specification for civil engineering construction Section DM: Earthworks (roads, subgrade)
SANS 1200 GA	Standardized specification for civil engineering construction Section GA: Concrete (small works)
SANS 1200 GE	Standardized specification for civil engineering construction Section GE: Precast concrete (structural)
SANS 1200 HA	Standardized specification for civil engineering construction Section HA: Structural steelwork (sundry items)
SANS 1200 L	Standardized specification for civil engineering construction Section L: Medium-pressure pipe lines
SANS 1200 LB	Standardized specification for civil engineering construction Section LB: Bedding (pipes)
SANS 1200 LE	Standardized specification for civil engineering construction Section LE: Stormwater drainage
<u>SANS 1200 M</u>	Standardized specification for civil engineering construction Section M: Roads (general)
<u>SANS 1200 M</u>	Standardized specification for civil engineering construction Section ME: Subbase
<u>SANS 1200 M</u>	Standardized specification for civil engineering construction Section MF: Base
<u>SANS 1200 M</u>	Standardized specification for civil engineering construction Section MFL: Base (light pavement structures)
SANS 0160	The general procedures and loadings to be adopted in the design of buildings
SANS 10100-1	The Structural use of Concrete, Part 1
SANS 10100-2	The Structural use of Concrete, Part 2
SANS 10144	Detailing of steel reinforcement to concrete
SANS 10160:2011	Basis of structural design and actions for buildings and industrial structures Parts 1-8.
SANS 920	Steel bars for concrete reinforcement
BS 8007: 1987	Design of Concrete Structures for retaining aqueous liquids
SANS 2001-CC1	Construction works Part CC1: Concrete works (structural)
SANS 2001-BE	Construction works Part BE1: Earthworks (general)

Number	Title
SANS 2001-BS1	Construction works Part BS1: Site clearance
SANS 2001-CC2	Construction works Part CC2: Concrete works (minor works)
SANS 10313	Protection against lightning - Physical damage to structures and life hazard
SANS 471	Portland cement (ordinary, rapid-hardening, and sulphate-resisting)
SANS 878	Ready-mixed Concrete
SANS 1077	Sealing compounds for the building and construction industry, two-component, polyurethane-base
SANS Methods 5856	Bulking of fine aggregates
SANS Method 860	1994 Concrete tests – dimensions, tolerances and uses of cast specimens.
SANS Method 861-2	1994 Concrete tests – sampling of freshly mixed concrete.
SANS Method 861-2	1994 Concrete tests – making and curing of test specimens.
SANS Method 862-1	1994 Concrete tests – consistency of freshly mixed concrete – slump test.
SANS Method 863	1994 Concrete tests – compressive strength of hardened concrete.
SANS 1526	Thermoplastics Sheeting For Use As A Geomembrane
GRI Test Method GM13	Test Methods, Test Properties and Testing Frequency for High Density Polyethylene (HDPE) Smooth and Textured Geomembranes
SANS 1305	Sealing compounds for the building industry, one-component, rubber-base
SANS 1083	Aggregates from natural sources - Aggregates for concrete
240-56227929	Power Station Standby Diesel Generators Specification Standard

5 List of drawings

5.1 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 No	Rev	Title
0.45 51380/24.2	1	EXISTING DAM WEST/EAST TOE WALL AND FILTER DRAIN LONGITUDINAL SECTION
0.45 51380/025	1	EXISTING DAM WEST/EAST BLANKET WALL AND FILTER DRAIN LONGITUDINAL SECTION
0.45 51380/027	P1	EXISTING DAM WEST/EAST CATWALK CONSTRUCTION DETAILS
0.45 51380/026.2	1	EXISTING DAM WEST/EAST BLANKET WALL AND FILTER DRAIN LONGITUDINAL SECTION
0.45 51380/030	1	EXISTING DAM 2 EAST NEW 750NB FLOATING PENSTOCK GENERAL ARRANGEMENT
0.45 51380/031	0	EXISTING DAM 2 EAST NEW 750NB FLOATING PENSTOCK DETAILS AND PIPE SCHEDULE
0.45 51380/033	0	EXISTING DAM 2 EAST LONGITUDINAL SECTION
0.45 51380/034	0	EXISTING DAM 2 EAST CATWALK DETAILS
0.45 51378/001	3	EXISTING ASH DAM REMEDIAL WORKS GENERAL ARRANGEMENT
0.45 51378/003	0	EXISTING DAM REMEDIAL DRAIN WORKS
0.45 51378/004	2	EXISTING DAM NEW FLOATING PENSTOCK LONG SECTION AND DETAILS
0.45 51378/005	0	EXISTING DAM MONITORING LAYOUT
0.45 51378/007	1	EXISTING DAM SOUTH FACE BUTTRESS DRAINAGE DETAILS
0.45 51378/008	0	EXISTING DAM PENSTOCK LINES AT SOUTH FACE BUTTRESS LONG SECTIONS
0.45 51378/009	0	EXISTING DAM 750 NB EXISTING PENSTOCK LINE EXTENTIONS AT SOUTH FACE BUTTRESS
0.45 51378/010	0	EXISTING DAM TEMPORARY MAIN PENSTOCK AT SOUTH FACE BOUNDARY
0.45 51378/011	0	EXISTING DAM TEMPORARY INTERMEDIATE PENSTOCK
0.45 51378/015	0	EXISTING ASH DAM SITE SOIL PROFILES
0.45 51378/016	0	EXISTING DAM TOE, MIDDLE AND BLANKET DRAIN LONG SECTIONS AT SOUTH FACE BUTTRESS
0.45 51378/018	0	EXISTING DAM SOUTH FACE BUTTRESS PUMP STATION NUMBER 2 REINFORCE DETAILS
0.45 51378/017	0	EXISTING DAM SOUTH FACE BUTTRESS PUMP STATION NUMBER 2 GENERAL ARRANGEMENT
0.45 51378/020	0	SLURRY FEED INTER-CHANGE TRANSITION BETWEEN BOX AND LINED TRAP DRAIN
0.45 51378/022	1	EXISTING DAM INSPECTION MANHOLE ON DRAIN OUTLET IN 25MM STEP IN
0.45 51378/028	P1	EXISTING DAM 1 WEST NEW FLOATING PENSTOCK LONG SECTION AND DETAILS
0.45 51379/005	0	ASH DISPOSAL IN PIT NUMBER 1 CLOSURE WALL

		BULK EARTHWORKS UNDERDRAINAGE AND FINE ASH WALL GENERAL ARRANGEMENT AND DETAILS
0.45 51379/006	0	SEEPAGE PUMP-SUMP PIT NUMBER 1 GENERAL ARRANGEMENT AND REINFORCEMENT DETAILS
0.45 51618	0	ASH DAM NEW EXTENSION (EAST SECTION) PLAN SHOWING LOCATION OF TEST PITS AND PIEZOMETRES WITH CROSS SECTIONS SHOWING SUBSURFACE MATERIALS

C4: Site Information

Site Information is information about the *site* at the time of tender which the tendering contractor needs to allow for in his rates and Prices. The information does not change after contract award, nor does it describe or specify anything which the Parties do during the contract. It is only referred to during administration of the contract if the *Contractor* encounters conditions which are different to those described here. The *Contractor* will then make a comparison between actual conditions encountered and those described here in his assessment of any additional cost or time he may need to be compensated for in order to complete the works. Disputes about the difference between the effects of conditions encountered and those which the *Contractor* allowed for in his Prices will be minimised if the information given here is complete and relevant. If no information is given the tendering contractor will need to guess what he may encounter thus tendering higher Prices to allow for conditions that may not even exist.

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

1. Access limitations

State if there is any physical, time or other “third party” constraint associated with gaining access to and doing work on the *site* that may not be immediately apparent from an inspection of the *site*.

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

If earthworks are included in the Scope of Work, provide details of the ground conditions the *Contractor* is likely to encounter when doing the work. This could vary from indicating where a test pit has been opened up for the *Contractor* to make his own observations to providing full borehole logs and associated geotechnical report.

3. Hidden and other services within the *site*

Provide details of underground or other hidden services which the *Contractor* may encounter whilst doing the work. Instructions about how to deal with them if encountered should be included in the Works Information.

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

If work is to be carried out on existing buildings or facilities Site Information would be the ‘as-built drawings’ of those buildings or facilities. If these are not a correct statement or not available other means of describing the existing buildings or facilities would have to be used, such as providing photographs