



NEC3 Engineering & Construction Contract

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

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

for **For the supply, installation, and commissioning of two scraper chain mobile feeders and all auxiliaries at Hendrina Power Station. It is a once off project that can take up to 12 months to be completed.**

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CONTRACT No. [Insert at award stage]

Part C1: Agreements & Contract Data

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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:

Supply, installation, and commissioning of two scraper chain mobile feeder

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

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

Options A	The offered total of the Prices exclusive of VAT is	R [●]
	Sub total	R [●]
	Value Added Tax @ 15% is	R [●]
	The offered total of the amount due inclusive of VAT is ¹	R [●]
	(in words) [●]	

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

Signature(s)

Name(s) _____

Capacity _____

For the tenderer:

(Insert name and address of organisation)

Name & signature of witness

Date

Tenderer's CIDB registration number (if applicable)

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

Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

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

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

Signature(s)

Name(s)

Capacity

**for the
Employer**

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

Name &
signature of
witness

Date

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

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

Note:

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

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

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

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

For the tenderer:

For the Employer

Signature _____

Name _____

Capacity _____

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

(Insert name and address of organisation)

Name & signature of witness _____

Date _____

C1.2 ECC3 Contract Data

Part one - Data provided by the *Employer*

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 and secondary Options	A: Priced contract with activity schedule W1: Dispute resolution procedure X2 Changes in the law X7: Delay damages 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)	Mandy Motau
	Address	Hendrina Power Station Impala road Pullenshope 1096
	Tel	013 296 3903
	Fax	N/A
	e-mail	MotauMb@eskom.co.za
11.2(13)	The <i>works</i> are	Supply, installation, and commissioning of two scraper chain mobile feeder

11.2(14)	The following matters will be included in the Risk Register	<ol style="list-style-type: none"> 1. Plant availability to gain access. 2. Availability of the responsible person for permit to work (PSR). 3. Any other matter posing a risk to the contract will be discussed amongst the parties and agreed upon before recorded on the risk register. 	
11.2(15)	The <i>boundaries of the site</i> are	Hendrina Power Station (Only allocated sections of the works).	
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	3 working days	
2	The Contractor's main responsibilities	Data required by this section of the core clauses is provided by the Contractor in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.	
3	Time		
11.2(3)	The <i>completion date</i> for the whole of the works is	12 months after awarding of the contract	
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	Condition to be met	key date
		1 Safety file approval	One week after kick-off meeting.
		2 Detailed design approval	15 working days after kick-off meeting.
		3 Delivery of the feeders	
		4 Ground/civil work	
		5 Installation of the feeders	
		6 Commissioning	
30.1	The <i>access dates</i> are:	Part of the Site	Date
		1 Hendrina Power Station	After safety file approval
31.1	The Contractor is to submit a first programme for acceptance within	1 week of the Contract Date.	
31.2	The <i>starting date</i> is	TBA	

32.2 The *Contractor* submits revised programmes at intervals no longer than **3 working days and weekly updates.**

35.1 The *Employer* is not willing to take over the works before the Completion Date. **Completion date of the whole works as per the program.**

4 Testing and Defects

42.2 The *defects date* is **52 weeks after Completion of the whole of the works.**

43.2 The *defect correction period* is **1 week**
except that the *defect correction period* for **Safety, production related, and environmental contravention is 3 working days**

and the *defect correction period* for **2 working days upon notification**

5 Payment

50.1 The *assessment interval* is **between the 22nd and 25th day of each successive month.**

51.1 The *currency of this contract* is the **South African Rand.**

51.2 The period within which payments are made is **30 days after invoice have been received.**

51.4 The *interest rate* is **the publicly quoted prime rate of interest (calculated on a 365 day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and**

(ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted *mutatis mutandis* every 6 months thereafter and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.

6 Compensation events

60.1(13) The place where weather is to be recorded is: **Hendrina Power Station**

The *weather measurements* to be recorded for each calendar month are, **the cumulative rainfall (mm)**

the number of days with rainfall more than 10 mm

the number of days with minimum air temperature less than 0 degrees Celsius

the number of days with snow lying at 09:00 hours South African Time

and these measurements:

The *weather measurements* are supplied by

Refer to Part C4 of site information

The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at:

Hendrina Power Station, Pullenshope, Mpumalanga

and which are available from:

the South African Weather Bureau and included in Annexure A to this Contract Data provided by the *Employer*

60.1(13)	Assumed values for the ten_-year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are:	As stated in Annexure A to this Contract Data provided by the <i>Employer</i> . Note: If this arrangement is used, delete the rows above for 60.1(13) and delete this note.
7	Title	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	1. As referenced by the Risk Register
9	Termination	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
10	Data for main Option clause	
A	Priced contract with activity schedule	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.
11	Data for Option W1	
W1.1	The <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 [•]

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	[•] 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.

12 Data for secondary Option clauses

X2	Changes in the law	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.		
X5	Sectional Completion			
X5.1	<i>The completion date for each section of the works is:</i>	Section	Description	Completion date
		1	[•]	[•]
		2	[•]	[•]
		3	[•]	[•]
X7	Delay damages (but not if Option X5 is also used)			
X7.1	Delay damages for Completion of the whole of the <i>works</i> are	0.5% of the total project value per day up to a limit of 5% total project value.		
X15	Limitation of the <i>Contractor's</i> liability for his design to reasonable skill & care	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.		
X16	Retention (not used with Option F)			
X16.1	The <i>retention free amount</i> is	R0.00		
	The <i>retention percentage</i> is	10%		
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
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 and• 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	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:	the total of the Prices other than for the additional excluded matters. The <i>Contractor's</i> total liability for the additional excluded matters is not limited. The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for <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	The <i>end of liability date</i> is	(i) 12 months after the <i>defects date</i> for latent Defects and (ii) the date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter. A latent Defect is a Defect which would not have been discovered on reasonable inspection by the <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.

- Z4.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Project Manager*.
- Z4.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.
- Z4.4 The taking of images (whether photographs, video footage or otherwise) of the *works* or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Project Manager*. All rights in and to all such images vests exclusively in the *Employer*.
- Z4.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

Z5 Waiver and estoppel: Add to core clause 12.3:

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

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

- Z6.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *works*. Without limitation the *Contractor*:
- accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Site;
 - warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of *works*; and
 - undertakes, in and about the execution of the *works*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.
- Z6.2 The *Contractor*, in and about the execution of the *works*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

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

- Z7.1 Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer's* procedures stated in the Works Information, showing the amount due for payment equal to that stated in the payment certificate.
- Z7.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in

time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.

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

Z8 Notifying compensation events

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

Z9 Employer's limitation of liability

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

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

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

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

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

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

Z12 Ethics

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

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

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

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

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

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

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

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

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

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

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

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

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

Z13 Insurance

Z 13.1 Replace core clause 84 with the following:

Insurance cover

84

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

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

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

INSURANCE TABLE A

Insurance against	Minimum amount of cover or minimum limit of indemnity
Loss of or damage to the works, Plant and Materials	The replacement cost where covered by the <i>Employer's</i> insurance The <i>Employer's</i> policy deductible, at Contract Date, where covered by <i>Employer's</i> insurance
Loss of or damage to Equipment	The replacement cost

Liability for loss of or damage to property (except the works, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the Contractor) caused by activity in connection with this contract	<p><u>Loss of or damage to property</u></p> <p><u>Employer's property</u> 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> The replacement cost</p> <p><u>Bodily injury to or death of a person</u> The amount required by applicable law</p>
Liability for death of or bodily injury to employees of the Contractor arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law

Z 13.2

Replace core clause 87 with the following:

The *Employer* provides the insurances stated in the Insurance Table B.

INSURANCE TABLE B

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

Z14 Nuclear Liability

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

Z14.2 The *Employer* is solely responsible for and indemnifies the *Contractor* or any other person against any and all liabilities which the *Contractor* or any person may incur arising out of or

resulting from nuclear damage, as defined in Act 47 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Contractor* or any other person or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

- Z14.3 Subject to clause Z14.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Contractor* or any other person, or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.
- Z14.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 47 of 1999, or any replacement section dealing with the same subject matter.
- Z14.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z15 Asbestos

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

- AAIA** means approved asbestos inspection authority.
- ACM** means asbestos containing materials.
- AL** means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.
- Ambient Air** means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.
- Compliance Monitoring** means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
- OEL** means occupational exposure limit.
- Parallel Measurements** means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
- Safe Levels** means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
- Standard** means the *Employer's* Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.
- SANAS** means the South African National Accreditation System.
- TWA** means the average exposure, within a given workplace, to airborne asbestos fibres, normalised to the baseline of a 4 hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.
- Z15.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the

regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.

- Z15.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor's* expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z15.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.
- Z15.3 The *Employer* manages asbestos and ACM according to the Standard.
- Z15.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.
- Z15.5 The *Contractor's* personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.
- Z15.6 The *Contractor* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.
- Z15.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer's* expense, and conducted in line with South African legislation.

Annexure A: One-in-ten-year-return weather data obtained from SA Weather Bureau for [weather station]

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

	<i>Weather measurement</i>				
Month	Cumulative rainfall (mm)	Number of days with rain more than 10mm	Number of days with min air temp < 0 deg.C	Number of days with snow lying at 08:00 CAT	[Other measurements if applicable]
January	[•]	[•]	[•]	[•]	
February	[•]	[•]	[•]	[•]	
March	[•]	[•]	[•]	[•]	
April	[•]	[•]	[•]	[•]	
May	[•]	[•]	[•]	[•]	
June	[•]	[•]	[•]	[•]	
July	[•]	[•]	[•]	[•]	
August	[•]	[•]	[•]	[•]	
September	[•]	[•]	[•]	[•]	
October	[•]	[•]	[•]	[•]	
November	[•]	[•]	[•]	[•]	
December	[•]	[•]	[•]	[•]	

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

C1.2 Contract Data

Part two - Data provided by the *Contractor*

[Instructions to the contract compiler: (delete this notes before issue to tenderers with an enquiry)

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

Notes to a tendering contractor:

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

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

Clause	Statement	Data
10.1	The <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 Responsibilities: Qualifications: Experience:	

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

		CV's (and further key persons data including CVs) are appended to Tender Schedule entitled .	
11.2(3)	The <i>completion date</i> for the whole of the works is		
11.2(14)	The following matters will be included in the Risk Register		
11.2(19)	The Works Information for the <i>Contractor's</i> design is in:		
31.1	The programme identified in the Contract Data is		
A	Priced contract with activity schedule		
11.2(20)	The <i>activity schedule</i> is in		
11.2(30)	The tendered total of the Prices is	(in figures)	(in words), excluding VAT
B	Priced contract with bill of quantities		
11.2(21)	The <i>bill of quantities</i> is in		
11.2(31)	The tendered total of the Prices is	(in figures)	(in words), excluding VAT
C	Target contract with activity schedule		
11.2(20)	The <i>activity schedule</i> is in		
11.2(30)	The tendered total of the Prices is	(in figures)	(in words), excluding VAT
D	Target contract with bill of quantities		
11.2(21)	The <i>bill of quantities</i> is in		
11.2(31)	The tendered total of the Prices is	(in figures)	(in words), excluding VAT
F	Management contract		
20.2	Work which the <i>Contractor's</i> will do himself is	Activity	price (lump sum or rate)
	Data for Schedules of Cost Components	Note "SCC" means Schedule of Cost Components starting on page 60, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC3 (April 2013).	

A	Priced contract with activity schedule	Data for the Shorter Schedule of Cost Components		
B	Priced contract with bill of quantities	Data for the Shorter Schedule of Cost Components		
41 in SSCC	The percentage for people overheads is:	%		
21 in SSCC	The published list of Equipment is the last edition of the list published by The percentage for adjustment for Equipment in the published list is	Minus %		
22 in SSCC	The rates of other Equipment are:	Equipment	Size or capacity	Rate
61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates. Please insert another schedule if foreign resources may also be used	Category of employee		Hourly rate
62 in SSCC	The percentage for design overheads is	%		
63 in SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:			
	If Option C, D or E is used	Data for Schedule of Cost Components		
23 in SCC	The listed items of Equipment purchased for work on this contract, with an on cost charge, are:	Equipment	Time related charge	Per (time period)
24 in SCC	The rates of special Equipment are:	Equipment	Size or capacity	Rate

44 in SCC	The percentage for Working Areas overheads is:	:	%
51 in SCC	The hourly rates for Defined Cost of manufacture or fabrication outside the Working Areas are Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates Please insert another schedule if foreign resources may also be used	Category of employee	Hourly rate
52 in SCC	The percentage for manufacture and fabrication overheads is		%
	If Option C, D, or E is used	Data for both schedules of cost components	
61 in SCC & SSCC	The hourly rates for Defined Cost of design outside the Working Areas are Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates. Please insert another schedule if foreign resources may also be used	Category of employee	Hourly rate
62 in SCC & SSCC	The percentage for design overheads is		%
63 in SCC & SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included as a cost of design of the <i>works</i> and Equipment done outside the Working Areas are:		
	If Option C, D or E is used	Data for the Shorter Schedule of Cost Components	
41 in SSCC	The percentage for people overheads is:		%
21 in SSCC	The published list of Equipment is the last edition of the list published by The percentage for adjustment for Equipment in the published list is		%

22 in SSCC	The rates of other Equipment are:	Equipment	Size or capacity	Rate

PART 2: PRICING DATA

ECC3 Option A

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

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.	Activity description	Quantity	Unit	Unit Rate	Cost
1.	Site Establishment	1	Sum		
2.	Preliminaries & Generals	1	Each		
3.	Supply of new wheel mounted feeder and new sub-assemblies	2	Each		
4.	Delivery of new wheel mounted feeder and new sub-assemblies	2	Each		
5.	Site Assembly and Installation of Reclaim Feeder (Including all electrical equipment)	2	Each		
6.	Site commissioning of reclaim feeders	2	Sum		
7.	Training	1	Sum		
8.	Civil woks				
8.1	Design of base (including drawings)	1	Each		
8.2	Site clearance	2	Each		
8.3	Cable detection	2	Each		
8.4	Construction of base	2	Each		
9.	Site de-establishment	1	Sum		

C2.2 the *activity schedule*

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

PART 3: SCOPE OF WORK

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C3.2	<i>Contractor's Works Information</i>	
	Total number of pages	

C3.1: EMPLOYER’S WORKS INFORMATION

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 - 5.1.6 Title to materials from demolition and excavation..... [2122](#)
 - 5.1.7 Cooperating with and obtaining acceptance of Others [2223](#)
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1 Description of the works

1.1 Executive overview

A scrapper chain feeder, also known as a scraper conveyor or chain conveyor, is a mechanical device used primarily in bulk material handling applications. Its primary purpose is to transport materials (coal in this case) from one point to another in a continuous, efficient, and controlled manner.

Scraper chain mobile feeders are required for the coal handling plant at Hendrina Power Station. Due to the unavailability of coal supply from the mine via the mine conveyor, coal is now transported to the station via trucks. The feeders are required to transfer coal from the stockyard to the main conveyor belt. This is done by front-end loader pushing coal onto the feeder which eventually dispenses at a height above the conveyor belt. Currently coal reclaiming is done at two different points of the coal handling plant namely at belt 4B and belt 18. This project will cover the supply, installation, and commissioning of two scrapper chain mobile feeders and all its auxiliaries. The auxiliaries include but not limited to:

- All electrical components and cables which will support function of the mobile feeder and all other equipment required for the operation of the mobile feeder.

The two feeders will be place at conveyor 18 (replacing the damaged one) and at conveyor 4A (new installation).

1.2 Employer’s objectives and purpose of the works

Hendrina currently has one scrapper chain feeder to feed coal to the conveyor belt and ultimately to the units, should this chain feeder break, the station will be unable to supply coal in a continuous, efficient, and controlled manner which can result in tripping the units. The purpose of this project is to purchase two new additional chain feeders to ensure that the station has sufficient redundancy to feed coal to the units.

1.3 Interpretation and terminology

The following defined words are used in this works information

Definition	Description
Detail Design	Process to develop and issue Approved for Construction documents and drawings in accordance with the Design Base, including Quality Control, Quality Assurance, and Change Management.
System	An integrated set of constituent pieces that are combined in an operational or support environment to accomplish a defined objective. These pieces include people, hardware, software, firmware, information, procedures, facilities, services and other support facets
Availability	Relates to the ability of the system-of-interest to be accessed and operated when needed.
Maintainability	Relates to the ability of the intended system to be easily serviced or repaired, including the ability to be easily diagnosed. In this context, maintainability is synonymous with ‘Repairability’ or ‘Serviceability’
Reliability	Relates to the ability of the intended system to perform within the specification limits with correct and consistent results over time. This includes the numerical reliability characteristics (with confidence levels, if appropriate).

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
AFC	Approved for Construction
BMH	Bulk Materials Handling
EMS	Environmental Management System
HPS	Hendrina Power Station
IFC	Issued for Construction
IP	Ingress Protection
ISO	International Standards Organisation
kPa	Kilo Pascal
LV	Low Voltage
m	Meter(s)
m/s	Meters per second
mA	Millie Amp
MV	Medium Voltage
OHS	Occupational Health and Safety
PS	Power Station
PTW	Permit to Work
QCP	Quality Control Plan
QCP/QIP	Quality Control Plan / Quality Inspection Plan
SHEQ	Safety, Health, Environment and Quality
SOW	Scope of Work

2 Management and start up.

2.1 Management meetings

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Project meeting Kick-off	Once-off prior to project start or as instructed by the project manager	Site or where instructed by the <i>Project Manager</i>	<i>Employer.</i> <ul style="list-style-type: none"> • Project Manager • SHE officer • System Engineer • Doc centre representative <i>Contractor.</i> Site Manager/Project manager
Risk reduction meeting.	To be held weekly or as instructed by the project manager starting from the time the feeder is ready to be delivered to site.	Site or where instructed by the <i>Project Manager</i>	<i>Employer.</i> <ul style="list-style-type: none"> • Project Manager • SHE officer • System Engineer <i>Contractor.</i>

			<ul style="list-style-type: none"> • Site Manager/Project manager / Supervisor • SHE Rep
Progress meetings	Weekly or as instructed. by the <i>Project Manager</i>	Site or where instructed by the Project Manager	<p><i>Employer.</i></p> <ul style="list-style-type: none"> • Project Manager • SHE officer(optional) • System Engineer <p><i>Contractor.</i></p> <ul style="list-style-type: none"> • Site Manager/Project manager / Supervisor
Safety toolbox talks	Weekly	At work site or where instructed by the contractors SHE Rep	<p><i>Employer.</i></p> <ul style="list-style-type: none"> • Project Manager (optional) • SHE officer(optional) • System Engineer (optional) <p><i>Contractor.</i></p> <ul style="list-style-type: none"> • Site Manager/Project manager / Supervisor • SHE Rep • All other workers involved in the project.

It should be noted that the above-mentioned attendees are mandatory as a minimum unless otherwise stated, any other individuals which are deemed necessary in the meetings maybe invited.

All other meetings which may be deemed necessary maybe convened at times and locations to suit the Parties, the nature and the progress of the *works*. Records of these meetings shall be submitted to the *Project Manager* by the person convening the meeting within five days of the meeting.

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

All toolbox talks should document the points which were discussed during the toolbox talks and the attendance register capturing the details of all individuals which attended the toolbox talk.

2.2 Documentation control

The *Contractor* shall submit all documentation to the *Project Manager's* requirements. All relevant documentation and drawings, including revisions, will be issued to the *Contractor*, but control, maintenance and handling of these documents will be the *Contractor's* sole responsibility and at its expense, and managed with a suitable document control system developed by the *Contractor* and accepted by the *Project Manager*.

Contractual correspondence

- Properly compiled letters on official Company letter head or forms attached to an e-mail and not as a message in an e-mail itself.
- Alpha numeric identification – Reference: Date / Project no / Communication number. The project number is P1821201
- All correspondence to be addressed to the *Project Manager* in writing.

Summary of the documentation required from the Contractor before and during construction. includes the following:

DOCUMENT	Before	During	After	Comments
Project Plan (in a form of a Gantt chart)	X			
Safety File	X			To be submitted prior to equipment delivery to site
Quality Control Plan (and all its supporting documents)	X			
Method Statements	X			To be submitted prior to equipment delivery to site
Materials Inventory (Spares list) with specifications		X		
Concrete base design	X			To be submitted prior to equipment delivery to site
Drawing Register		X		
Progress Schedule (in a form of a Gantt chart)		X		
Application for Payment		X		
Concrete Batching note				
Cube Test Reports		X		
Monthly Safety Report		X		
Transmittals		X		
Project handover certificate			X	
Operating and maintenance manuals				
Test certificates			X	This includes all test certificates relevant to this project

The final data pack should consist of 1(one) x hard copy and 1 (one) x soft copy loaded in a USB. The pack should have dividers with numbers and an index for ease of reading.

Communication

All correspondence from the Contractor is signed by the Contractor’s authorised representative.

Correspondence from the Project Manager is issued and signed in the name of the Project Manager or his authorised representative.

All formal correspondence from the Contractor is addressed to the Project Manager or his authorised representative and delivered to the Project Manager or his authorised representative.

Emails and other forms of electronic communication (collectively referred to herein as emails) between the Contractor and the Project Manager are only for the expedient transfer of preliminary technical data and non-contractual information.

The Contractor provides all contractually required submittals, notifications and the like by means of official correspondence or formal document transmittal.

Emails or documentation included therein, sent from the Project Manager to the Contractor do not, in themselves, constitute either acceptance of a proposal from the Contractor or an instruction under the terms of the contract either of which may be or may result in a compensation event to the contract.

The Contractor does not act on any email that the Contractor believes results in a compensation event to the contract whether or not the email by the Project Manager stated that it constituted a compensation event. The Contractor requests formal written confirmation of any instruction that may be or may result in a compensation

event and receives this confirmation through formal correspondence, document transmittal, and *Project Manager's* instruction or compensation event, before acting on such an instruction.

Signature authorities

- The *Contractor* provides, a "Signature Authorization Form", the names and specimen signatures of those individuals within the *Contractor's* organization authorized to sign documents on behalf of the *Contractor*. The *Contractor* also specifies the financial or other limits of authority for each individual.
- The *Contractor* delegate's authority within its organization to home office and field office personnel as required for effective performance of the work.
- The *Contractor's* Contract Signatory signs the "Signature Authorization Form".

Drawings and Document Transmittals Documentation Requirements

The *Contractor* submits all documentation conforming to the requirements of the *Employer and / or the Project Manager* applicable standards and specifications with the following specific requirements:

- When required, the *Contractor* transmits to the *Employer / Project Manager*, technical submissions, sketches or drawings, calculations and other pertinent data, in sufficient detail to enable the *Employer / Project Manager* to review the information and determine that the *Contractor* clearly understands the requirements of the contract.
- Documents and data provided by the *Contractor* under the contract are subject to the *Employer / Project Manager* review and accept prior to *Contractor's* start of procurement.
- Review and acceptance of drawings, documents and / or data, etc. by the *Employer / Project Manager*, does not absolve the *Contractor* from any responsibilities under this contract.
- The review by the *Employer / Project Manager* with or without comments does not relieve the *Contractor* of any obligations or requirements under the contract nor be construed as an authorization of, or consent to, any deviation from the contract. If the *Contractor* considers that the *Employer / Project Manager* comments constitute a compensation event to the contract, the *Contractor* requests a formal instruction.
- All drawings and other documents are in English and are sized in accordance with metric standard sizes and carry titles to indicate equipment numbers or any other identification number of the portion of work covered on the particular drawing and / or document.
- The creation, issuing and control of all Engineering Drawings will be in accordance to the latest revision of the *Employer's* standard: 240-86973501 (Engineering Drawing Standards – Common Requirements).
- All *Contractors* are required to submit electronic drawings in Micro Station (DGN) format, and scanned drawings in pdf format. No drawings in TIFF, AUTOCAD or any other electronic format will be accepted. Drawings issued to the *Employer* may not be "Right Protected" or encrypted.
- The revision number marks changes or additions to any document, at the point of a revision, and the revision is reflected in its title block or drawing number by an appropriate revision indication.
- The *Contractor* is, in interpreting the drawings and specifications, bound by the figures marked thereon and not by scaled measurements.
- If the *Contractor* believes that new or revised IFC (issued for construction) documents constitute a change to the Contract, the *Contractor* notifies *Employer / Project Manager* of the change and does not proceed with the changes until officially instructed to do so by the *Employer / Project Manager*.

- The *Employer / Project Manager* reviews engineering information or queries raised and returns comments to the *Contractor* within the period of reply. This review by the *Employer / Project Manager* does not relieve the *Contractor* of his responsibility to ensure that the package is in accordance with the requirements.
- The *Contractor* submits a written signed off As built as final issue of the “Handover” documentation.

Design Specifications/ Standards

The following is a list of specifications and standards applicable to the buffalo feeder project and will be supplied by the employer. The contractor must comply with the requirements in these documents and all other documents referred to in them.

Document title	Document number
Scraper Chain Feeder Standard	240-163146409
Scope of work	380- 136165

2.3 Health and safety risk management

The contractor shall comply with generation Safety regulations (240-150642762) and all documents which are referenced by the regulation.

The *Contractor* shall also ensure and allow for in his pricing structure that all Personal Protective Equipment (PPE) issued to his employees are in accordance with the *Employer's* Personal Protective Equipment Specification (240-44175132).

Prior to commencement of the work onsite the contractor must send the company safety file to the employer for review and approval. It is the responsibility of the contractor to ensure that the safety file is accounted for in the pricing.

Upon approval of safety file prior to commencement of work the contractor shall ensure that all personal which have required to conduct the work are inducted. Induction is conducted every weekday at 09:00 AM in the carwash building.

The *Contractor* shall present all lost time incident and medical incidents to the *Employer*, the presentation of all incidents shall be done within 2 weeks of the incident. All incidents shall be presented by the *Contractor's* representative to the *Employer*.

The *Contractor* shall supply the *Project Manager* with a monthly safety report indicating the total number of employees on site, the number of hours worked, the number of hours lost due to injury and details of any incidents/accidents.

Minutes of Safety Meetings are forwarded to the Project Manager.

Reporting of incidents shall be in accordance with Employer's procedure.

Termination due to Non-Compliance.

The *Employer* reserves the right to terminate the contract in the event that the *Contractor* is found to be consistently non-compliant to any SHEQ related issue.

2.4 Environmental constraints and management

The *Contractor* ensures that all equipment used in the designs/ solution offered conforms to all applicable environmental legislation.

The *Contractor* adheres to Hendrina Power Station Environmental Management System that must meet the requirements for the Code of Practice for EMS, ISO 14001:2004.

The EMS requirements are detailed in the latest revision of the following documents, which are available from the *Project Manager* on request, and include:

- The Hendrina Power Station Environmental Policy (HSPPPIN005).
- The identify & Update Environmental Aspects Procedure (HSPPIN024).
- The Objectives & Targets Procedure (HSPPIN026].
- The Environmental Emergency Preparedness Procedure (HSPPIN032).
- The Training, Awareness & Competence Procedure (HSPPIN029).
- The Prevention & Cleaning of Oil Spills Procedure (HSPPON003).
- The Waste Management Procedure (HSPPIN003).
- The Roles and Responsibilities Procedure (HSPPIN028).
- The EMS Non-Conformance, Corrective and Preventative Action (HSPPIN034)
- The relevant Environmental Management Programmes (EMP's) and Aspects on the EMS database - this is continually changing and is available from the Employers Representative.
- Compliance to all relevant environmental legislation, as detailed in the latest version of the Hendrina Power Station Legal Register available from the Employers Representative.
- All operational procedures that include environmental requirements, relevant to the Works Information or Scope of this contract.

The *Contractor* is responsible to comply with any new environmental requirements, relevant to the *Works Information* or *Scope* that may come into effect as part of Hendrina Power Station's EMS during the duration of this contract.

The *Contractor* is responsible to ensure representation at Environmental meetings that may require input for the updating of the EMS as well as training on an ad-hoc basis.

If there is uncertainty around any environmental issues, the Environmental Department at Hendrina Power Station may be contacted on (013) 296 3011 or (013) 296 3910 or (013) 296 3013.

2.5 Quality assurance requirements

Compliance to Eskom Hendrina Power Station's Quality procedure (QM 58) must be adhered to at all times. The Quality Inspection Plan (QIP) to be submitted for approval by the *Employer's* project engineer before any work commences. The Contractor to adhere to ISO 9001: Quality Management Systems. The *Contractor* conforms to the following Quality Management requirements:

- The quality requirements are as per ISO 9001:2008 and Hendrina Power Station Procedure HSPPA 006 "Quality requirements for quality related items".
- Quality Inspection Plans shall be in the format of FESK 231 "Quality inspection plan form".

Supply, Installation, and Commissioning of two Scraper Chain Mobile Feeders & all their Auxiliaries

Documents submitted for review and acceptance by the Project Manager after the Contract Date and prior to the commencement of work are referred to in HSPPA 006.

The *Contractor* submits a full detailed Contract Quality Plan for acceptance within two weeks of the Contract Date.

No site work and designs are allowed unless the *Employer* accepts the QCP and QIP's.

Apart from any statutory data packages required, the *Contractor* also compiles a data package (books) of the relevant drawings, test certificates etc. for each section of work which must be reviewed and signed off by the employer prior to commencement of work.

The *Contractor* is responsible for defining the level of QA/QC or inspection to be imposed on his Sub-Contractors and suppliers of material. This level should be based on criticality of equipment and be submitted to the Project Manager for acceptance in the form of a QCP or ITP.

The *Contractor* submits a quality report on a biweekly basis, including the following:

- A list of Defects with those older than 2 weeks being flagged and an explanation attached.
- Inspections completed/outstanding
- Register of accepted Defects
- Non-conformance Reports, Corrective Action, Preventative Action and Concessions Reports

Copy of all work instructions and procedures when requested by the Project Manager

2.6 Programming constraints

The programme is to be submitted for acceptance in accordance with Core Clause 31 in the Engineering and Construction Contract, in terms of which resources to complete each activity must be clearly identified.

The *Contractor* will allow two weeks of the starting date of the project for compiling a schedule to be reviewed by Eskom.

The *Contractor* will be expected to use the allowed time from start date to prepare a proper schedule by interfacing with all relevant stakeholders. It is suggested that Gantt or bar chart formats be used for project planning, while progress graphs/schedules be submitted at weekly project meetings to monitor progress.

The programme is to include all the requirements of clause 31.2 of the Engineering and Construction Contract.

A weekly progress report is to be submitted to the *Project Manager* and be discussed during the weekly project progress meeting.

2.7 Contractor's management, supervision and key people

The *Contractor* shall submit an organizational structure showing his human resources and their lines of authority/communication.

The *Contractor* shall provide CV's for acceptance to Eskom for experienced and competent personnel in the following key positions:

- Safety officer with a SAMTRAC qualification or an equivalent safety management qualification. This individual should have an experience of 5 years or more.
- Electrician with a trade certificate the experience should be as per tender evaluation strategy (380-136164).

- Master Installation Electrician with a trade certificate, the experience should be as per tender evaluation strategy (380- 136164).
- Civil artisan with a trade certificate, the experience should be as per tender evaluation strategy (380-136164).
- C&I artisan with a trade certificate, the experience should be as per tender evaluation strategy (380-136164).
- Mechanical artisan with a trade certificate, the experience should be as per tender evaluation strategy (380- 136164).
- Project Manager/s Minimum competency level: Degree or equivalent in engineering/Construction Management / project management. This individual should have an experience of 5 years or more.
- A Quality Controller with an experience of 5 years or more.

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* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Project Manager's* payment certificate.

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

- Name and address of the *Contractor* and the *Project Manager*;
- The contract number and title.
- *Contractor's* VAT registration number.
- The *Employer's* VAT registration number 4740101508.
- Description of service provided for each item invoiced based on the Price List.
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT.
- Any other information as may be required.

An original invoice must be sent to the Accounts Payable Department and a copy to the *Project Manager*.

The *Contractor* must submit an FRI within 1 week of contract award.

Details on how to submit invoices and additional information:

- The *Contractor* must ensure that the Eskom order number is clearly indicated on your invoice together with the line number on the order you are billing for.
- All Electronic invoices must be sent in PDF format only.
- Each PDF file should contain one invoice; or one debit note; or one credit note only as Eskom's SAP system does not support more than one PDF being linked into workflow at a time.
- The *Contractors* E-mail may contain more than one PDF file (e.g. 2 invoices on 2 separate PDF files in one e-mail).
- Send all invoices in PDF to the following email addresses:
 - For local invoices: invoiceseskomlocal@eskom.co.za
 - For foreign invoices: Invoicesgrpcapital@eskom.co.za
- The *Contractor* can request a park invoice from the Finance Shared Services (FSS) contact centre which can then be followed up and corrected. The *Contractor* is welcome to forward the details of invoices to the FSS contact centre.
- All queries and follow up on local invoice payments should be made by contacting the FSS contact centre.
Tel: 011 800 5060
e-mail: fss@eskom.co.za

- For Foreign invoices, the *Contractor* will still be required to physically deliver hard copies of original documents to the respective documentation management centres even though you have e-mailed those invoices (Eskom is still seeking clarity from the South African Reserve Bank regarding e-invoicing for Foreign Invoices or invoices in foreign currency. Current requirements are that these manual invoices should still be submitted.

Tax Requirement

A PDF file that was created directly from a system meets the definition of original document and is allowed (including saving documents from excel to PDF, word to PDF etc.)

An Invoice that was printed and then scanned to PDF by the Vendor is not acceptable as this is not an original tax invoice by SARS definition but a copy.

The following wording needs to appear on the invoice: "Your invoice is encrypted in order to comply with SARS requirements that invoices and statements sent electronically are tamperproof."

If there is Cost Price Adjustment (CPA) on your invoice we recommend that the *Contractor* issue a separate invoice for CPA so that if there are any issues on the CPA the rest of the invoice can be paid while resolving the CPA issues.

Introduction of electronic invoicing does not guarantee payment but will ensure visibility of all invoices and ensure that no invoices get lost. If the goods receipt is not done the invoice will be parked and the system will automatically send an e-mail to the end user to do the goods receipt. This is also tracked by Eskom through the park invoice report.

The *Contractor* can request a park invoice report from the Finance Shared Services (FSS) contact centre which can then be followed up and corrected. The *Contractor* is welcome to forward the details of invoices corrected to the FSS contact centre.

Procedure for invoice payment:

Work done is assessed by Quantity Surveyor (QS), after which the Eskom QS and the *Contractor* agree on the assessment and the amount to be invoiced. The Eskom QS will then generate an assessment and payment certificate aligning to the *Contractor's* invoice that was agreed based on the assessment.

Assessment is scanned and sent to project officer and *Project Manager*. Originals to be filed in project file. Ensure that *Project Manager* signs off or approves the payment certificate before a Good Receipt (GR) is created. Goods receipt will be created on SAP and the goods receipt number emailed to the supplier. For work done GR number will be on payment certificate sent to supplier. Invoice is recorded and receipted as per the finance invoice receipting procedure.

2.9 Insurance provided by the *Employer*

Refer to the ECC Core Clause 87.1

2.10 Contract change management

As per NEC

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.

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

A risk register is to be kept by the *Contractor* in which all events are recorded. Records of events that could give rise to Compensation Events are to be kept up to date for inspection by the *Supervisor* and/or *Project Manager* at all times and this is to be kept in a risk register. This is not for inspection purposes but for management as per core clause 16.

2.13 Training workshops and technology transfer

In case where the Employer cannot provide the Authorised Supervisor as well as the Responsible Person, the *Contractor* is responsible of providing such people. No work will commence without an accredited Authorised Supervisor and accredited Responsible Person on site. ESKOM provides training free of charge.

The *Contractor* ensures that his personnel is authorised by sending them to attend PSR (Plant Safety Regulations) course. This person is responsible for taking permits on the plant and ensures that work is carried out safely as per PSR by adhering to all aspects contained in the course material.

Training and information regarding any proposed component that is equivalent to the existing is provided the *Contractor*. The *Employer* to be notified of such changes and installation is done only after approval by the *Project Engineer*. The *Contractor* is responsible for providing training in terms of operation and maintenance on the new system subsequent to installation.

3 Engineering and the Contractor's design

3.1 Employer's design

In accordance with the *Employer's* specifications which are provided to the *Contractor*.

3.2 Parts of the works which the Contractor is to design

Where the *Contractor* is to do designs, the *Contractor* shall submit designs for acceptance well in advance of construction in accordance to issued specifications with the tender.

The contractor is responsible for the for the design and construction of the concrete base which will carry the scrapper chain feeder.

3.3 Procedure for submission and acceptance of Contractor's design

All designs, drawings, bills of material including bolt lists and erection drawings to be submitted for approval before the intended date of fabrication.

Only checked drawings will be accepted for approval.

Fabrication and/or procurement of spares can commence as soon as such written approval is received from the *Engineer*.

The *Contractor* does not deviate from the approved drawings or the specification without the written permission of the *Engineer*.

3.4 Other requirements of the Contractor's design

In accordance with the *Employer's* specifications which are provided to the *Contractor*.

3.5 Use of Contractor's design

The Contractor to allow the Employer to use detailed designs, drawings, and all relevant documents for operational, maintenance purposes and for future developments whenever required. Copy rights to remain with the Employer.

3.6 Design of Equipment

The *Contractor* submits particulars of the design of an item of equipment for the *Project Manager* for review and acceptance if the design meets the *Employer's* specification.

3.7 Equipment required to be included in the works

The *Contractor* shall submit a list of all equipment and machinery required to execute the Works.

The *Contractor* supplies and delivers all equipment, materials, design drawings, labour, tools, scaffolding, consumables, storage facilities, accommodation and anything deemed necessary to provide the works.

3.8 As-built drawings, operating manuals and maintenance schedules

All drawings submitted by the *Contractor* for acceptance by the *Employer* comply with the following:

- Drawings will be set with an *Employer's* title block;
- All drawings are submitted in electronic format and a hard copy to the latest version (ver.8) of Micro station;
- The electronic file conforms to the requirements of the Employer - Standard GGS 0315 and GSE/94/Y004;
- The *Contractor* updates all existing drawings which do not conform to the as built status of the plant and submits it to the Doc Centre. All new drawings required are created electronically and produced on Micro station format. The *Contractor* also provides drawings for all new plant.
- The electronic file conforms to the requirements of the Eskom Drawing Standard (GGS 0315 and GSE/94/Y0004).
- Graphical symbols are used in accordance with DIN 2481 standard.
- All initial drawings drawn in Micro station SE format is forwarded to the System engineer via the *Project Manager* for verification of technical content, then forwarded to Design and Specifications department for verification of drawing standards and KKS coding.
- Verified drawings are returned to the *Contractor* for final update and approval (Signatures).
- All hard copies of approved drawings together with electronic files (on a CD) are submitted to the *Project Manager* for his final acceptance.
- All drawings are drawn from scratch using Micro-Station, they are not drawn using certain software and later converted to Micro-Station format.
- The Contractor identifies any additional labelling requirements, and submits it to the Project Manager in an Excel spread sheet. All plant labelling is done in liaison with Design & Specifications Department. This includes using the Labelling Standard (HSSSPA001) for manufacture and installation of plant labels.

4 Procurement

4.1 People

4.1.1 Minimum requirements of people employed on the Site

People employed on site shall have all relevant documents as required by law for employment within the country, i.e. relevant work permits and Identifications.

4.1.2 BBBEE and preferencing scheme

As per Eskom regulation.

Awarded Contract is expected to maintain or improve their B-BBEE Recognition Level for the duration of the contract.

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

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

.
[Insert the agreed ASGI-SA Compliance Schedule here]

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

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

4.2 Subcontracting

4.2.1 Preferred subcontractors

The contractor is free to select a subcontractor of his choice.

4.2.2 Subcontract documentation, and assessment of subcontract tenders

Not applicable to this contract.

4.2.3 Limitations on subcontracting

Not applicable to this contract.

4.2.4 Attendance on subcontractors

Not applicable to this contract.

4.3 Plant and Materials

4.3.1 Quality

The *Contractor* complies with the Employer's Quality Requirements as specified in Eskom Generation Standard (GGS 0462) and the Hendrina Quality procedure QM 58.

- *Employer's* Quality Department to inspect all equipment and components at the *Contractor's* workshop prior delivery to check for defects, test certificates and technical specifications. Damaged or defective structural steelwork and materials shall be set aside for the *Engineer* to inspect and to decide whether such items may be rectified, repaired or rejected. The *Engineer* to have the right to order the removal from the works of any defective or damaged material which have not been replaced or certified to his

satisfaction, even if the material have been built into the works. The *Contractor* to repair and replace all defective materials and rectify all defective workmanship at his own cost.

- ISO 9001:2008 “Quality management system” shall be applied at all times. It is the responsibility of the *Contractor* to review Quality Requirement documentation and to provide such documentation at arrival on site.
- The *Contractor* submits a Quality Inspection Plan (QIP) for the proposed work. This should be influenced and approved by the *Employer* before any commencement. Only an approved QIP is worked on during execution, any deviation is communicated to the Project Leader and approved by the *Employer* before continuing with the works.
- The *Contractor* complies with Hendrina Power Station’s Quality Procedure QM 58 document and GGSS 0407:Rev. 0, Specification for belt conveyor structural steelwork and welding

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

The *Employer* does not issue plant and material to the *Contractor* as part of this agreement. The *Contractor* shall have his own plant and material to carry out construction *Works*. The *Contractor* is required to know what plant and material needed to get the final end product of the *Employer* requirements.

The *Contractor* shall ensure that all machinery used on the construction is suitable for the purpose for which it is used, and it is installed, operated and maintained in such a manner as to prevent the exposure of persons and environment to danger, by taking measures including fencing and guarding ensuring that all equipment are kept in a good working and properly used. The *Contractor* shall ensure that the quality of material used in is suitable for the purpose for which was intended.

4.3.3 *Contractor’s* procurement of Plant and Materials

All transportation to site of plant and material required for this project will be by means of road transport. The *Contractor* must familiarise himself with the road conditions to site.

The responsibility of ensuring that the procured material is kept safe remains with the contractor.

4.3.4 Spares and consumables

The *Contractor* makes provision for what is needed to provide the *Works*. The *Contractor* to identify critical spares and includes them as part of the works. This to be clearly indicated on the contract cost breakdown.

4.4 Tests and inspections before delivery

All components will be inspected on the *Contractor’s* workshop before delivery. Material certificates, tests certificates must be available for this purpose. Other specific inspections will be carried out as per the Quality Inspection Plan (QIP). The *Engineer* is present during testing and signs-off should he/she become content.

Eskom will inspect the section of plant to be tested and will list all items that need to be rectified by the *Contractor* before testing starts. These items will generally relate to the safe operation of the section and the need to ensure that, in the opinion of the Eskom representative, the section will perform acceptably

4.5 Marking Plant and Materials outside the Working Areas

Not applicable

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

The Contractor is responsible for the provision of any equipment deemed necessary to provide the works (including temporary installations).

5 Construction

5.1 Temporary works, Site services & construction constraints

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

All the *Contractor's* employees shall be required to attend a safety induction course before they shall be allowed to work on the Site. It shall be the responsibility of the *Contractor* to ensure that all employees have attended the safety induction. The *Contractor* shall compile his safety file for approval at the safety officer. The safety officer shall first approve this file before the *Contractor* can attend the safety induction course.

A list of employees requiring safety induction shall be submitted at least 2 days in advance of arrival on site with the date and time of arrival so that safety induction can be arranged.

Site access control to HPS shall be arranged with the *project manager* after successfully completing the safety induction course.

Alcohol testing shall be conducted at any time on all employees entering the HPS premises. All staff that tested positive for alcohol shall not be allowed on site.

All vehicles shall comply with the Road Traffic Act.

Vehicle inspections shall be conducted daily and check sheets shall be kept at the *Contractor's*.

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

Restrictions to access on Site, roads, walkway, and barricades shall be observed.

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

Working hours at *Employer* are 07:00 -16:15 on Mondays to Thursdays and 07:00 -12:00pm on Fridays. Collection and delivery of any plant or equipment would be within working hours.

During the execution of the *works*, Contractor keeps records of signed registers or time sheets of the *Contractor's* specific employees on site, including subcontractors. *Contractor* keeps the records and avail it to the *Project manager* upon request.

5.1.4 Health and safety facilities on Site

The Medical Centre is used by all individuals on site for injuries and first aid related issues, however cost to perform medical services is covered by the *Contractor*.

The fire department is also available for fire and other related emergencies. Their respective contact details to be provided during induction. However, the *Contractor* must have their own appointed safety supervisor.

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

Contractor refers to section 2.4 of the issued Part C31 ECC3 Employer's Work Information, for environmental compliance to be adhered to during execution of this contract.

5.1.6 Title to materials from demolition and excavation

Employer has the title deeds to the waste accumulated from conducting the works. *Contractor* complies with the following waste disposal requirements:

- Construction rubble is disposed at the landfill site.
- Hazardous waste is disposed at a permitted landfill. *Contractor* submits disposal certificate to *Service manager* for approval.

5.1.7 Cooperating with and obtaining acceptance of Others

Site access is granted by *Project manager*. During contract period, *Contractor* works in parallel with other contractors.

The routing of all written communications is between the *Project manager* and the *Contractor* only. Any agreement between the *Contractor* and any other person representing the *Employer* which has not been routed via the *Project manager* is unacceptable and invalid.

Contractor takes charge of the work site and ensures no interference from other parties which may hinder the progress and completion of the works in the stipulated time frame.

5.1.8 Publicity and progress photographs

No pictures of anything on site are taken by the *Contractor* without prior approval by the *Project manager*.

5.1.9 Contractor's Equipment

The *Contractor* shall provide all Equipment that is required to complete the works.

The *Contractor's* Equipment shall not impair the operation or access to the plant.

The *Contractor* shall provide all or any temporary or expendable materials required for the storage of material.

Any Equipment, or appliances used by the *Contractor* shall conform to the applicable OHS Act safety standards and is maintained in a safe and proper working condition. The *Service manager* has the right to stop the *Contractor's* use of any Equipment which, in the opinion of *Service manager*, does not conform to the foregoing.

Off-loading and material handling Equipment such as cranes and fork lifts shall be supplied by the *Contractor* at their own cost.

The *Contractor* shall submit a list of all tools and equipment entering site. Equipment and tools not declared shall become the *Employer's* property.

On completion of the project, all tools and equipment shall be removed only with permission from the *Project manager* on the applicable approved *Employer* documents.

5.1.10 Equipment provided by the Employer

No equipment shall be provided by the *Employer*.

5.1.11 Site services and facilities

The *Contractor* shall conduct site inspection and establish what facilities (i.e. power supply, water, waste disposal, tele-coms, ablutions, fire protection and lighting) are required or necessary for providing the Works.

The *Contractor* shall provide everything else necessary for providing the Works. Any measures which the *Contractor* may require to maintain continuity and quality of supply shall be arranged by him at his own expense.

The contractor shall provide his own office facility. The employer will not provide office space to the contractor.

5.1.12 Facilities provided by the *Contractor*

Contractor shall provide all facilities necessary for providing the Works this includes but not limited to site office, printing facility etc.

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

Not applicable to this contract.

5.1.14 Survey control and setting out of the works

Not applicable to this contract.

5.1.15 Excavations and associated water control

The contractor shall drain and manage water found on their excavations.

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

Should there be any underground services that may require relocating; this should be discussed with the *Supervisor* who will discuss it with the *Project Manager*.

The *Employer* will provide a geotechnical report, it is the responsibility of the *Contractor* to ensure that this report is followed. The *Contractor* must take extra precautionary measure to ensure that no underground services are damaged.

The *Contractor* is responsible for ensuring that no underground piping as well as cabling is tampered with during execution. Any deviation to the initial cable routing should be raised with the *Project Manager* for the correct processes to be followed.

The *contractor* shall be responsible for repairing (at their own cost) any damaged caused by them on any underground service.

5.1.17 Control of noise, dust, water and waste

Refer to Safety, Health and Environmental Specifications for Principal contractors HSPHO/058.

5.1.18 Sequences of construction or installation

The *Contractor* adheres to the proposed method statement at all times, any deviations to be communicated to the *Engineer* via the *Project Manager*. Any intervention point on the QIP to be followed and signed off by the relevant personnel. The *Contractor* adheres to the accepted programme.

5.1.19 Giving notice of work to be covered up

Work to be covered up will be discussed In the weekly progress meeting.

5.1.20 Hook ups to existing works

The *Contractor* adheres to Eskom's lifesaving rules.

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* shall have done everything required to Provide the Works and commission the feeder as well as train the responsible personnel.

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

The *Employer* will not use the feeder until it has been commissioned and handed over to Hendrina Power Station by the *Contractor*.

5.2.3 Materials facilities and samples for tests and inspections

The *Contractor* shall be responsible for the strength and quality of all materials used and workmanship employed. The *Contractor* shall be responsible for the stability of the permanent works and the temporary works. The fact that the *Employer* has not objected during the construction period to any materials and/or workmanship employed by the *Contractor* and even though such materials and/or workmanship has been inspected by the *Supervisor* shall not relieve the *Contractor* of such responsibility.

5.2.4 Commissioning

Commissioning is done after installation of the feeder by the *Contractor* and witnessed the *Employer*. The *Employer* to sign off the QIP subsequent to successful commissioning.

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

In order to put the *works* into operation the *Employer* requires for the *Contractor* to be in attendance whilst the *Employer* does it.

5.2.6 Take over procedures

Handover is done after successful commissioning and all the returnable (data pack) are provided by the *Contractor*. The QIP's are signed by both Eskom *Engineering* as well as Quality personnel prior handover.

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

Project Manager arranges for the *Employer* to allow the *Contractor's* access within 1 day to and use of a part of the works which has been taken over if needed to correct a Defect. After the works have been put into operation, the *Employer* may require the *Contractor* to undertake certain procedures before such access can be granted.

5.2.8 Performance tests after Completion

Without derogating from or limiting the provisions of Sub-Clause - the *Contractor's* Obligations, the Tests on Completion are carried out subject to the provisions as set out below.

Supply, Installation, and Commissioning of two Scraper Chain Mobile Feeders & all their Auxiliaries

After manufacture and erection, the *Contractor* satisfies himself that the equipment is complete in all respects and shall carry out the necessary tests of the Plant, (supplied by the *Contractor*). During this period the *Project Manager* carries out visual inspection on the Plant and witnesses the tests.

The *Contractor* provides personnel and all Plant and equipment necessary for the tests.

The *Contractor* submits, for approval by the *Project Manager*, a complete and detailed test and inspection procedure for test before TO. This test and inspection procedure shall include all tests and inspections required in terms of the respective specifications and other tests and inspections deemed necessary by the *Contractor* to prove to the *Project Manager's* satisfaction that the Plant has been delivered according to this specification and shall include stability tests, operational tests under simulated conditions, functional tests, tests to prove the integrity of the safety and limit systems and inspections for final quality, including paint quality.

After approval of the test and inspection procedure by the *Project Manager*, the *Contractor* shall fully test the Plant supplied by him in the presence of the *Project Manager* and according to the approved procedure.

Training and certification of the *Employer's* Personnel are done during this period to render them competent to operate and maintain the Plant.

Preliminary Operating and Maintenance manuals are handed over three months prior to commencement of tests. Five hard copies and one electronic copy of the final manuals and preliminary as-built drawings are handed over before TO.

All motions of the Plant are tested under static-load and static-load plus simulated dynamic load conditions (static tests loads are provided by the *Contractor*), where applicable, to prove correct operation and to enable position indicators and limit switches to be set, and to make other operational adjustments. Live-load are defined as the safe working load when the machine is working at maximum capacity, and including dynamic factors such as wind loads, shock loads due to acceleration and deceleration, etc.

The Plant is tested in empty running condition to confirm that the complete Plant performs according to the specification. The following is tested and confirmed:

- Confirmation that the control system performs according to the design with reference to control and sequence starting and stopping and that all protection devices, limits and the communication links operate correctly.

Before the commencement of any tests the *Contractor* provides the initial fill of oil for all gearboxes and grease for components which require grease lubrication.

All simulation devices required are provided by the *Contractor*.

5.2.9 Training and technology transfer

In-factory and on-site training for the *Employer's* Personnel in the operation and maintenance of the equipment are carried out by the *Contractor* before.

The *Contractor* shall provide training in the use of the instruction manuals, drawings, diagnostic features and equipment for operation and maintenance of the Works.

5.2.10 Operational maintenance after Completion

The *Employer* is responsible for maintenance and operation of the system after a successful handover (excluding the defect period).

6 Plant and Materials standards and workmanship

6.1 Investigation, survey and Site clearance

The *Contractor* takes measurements and/or 3D scans of the existing conveyor belt and site setup where the feeder will be installed for the purpose of manufacturing the feeder to suit the current setup. The Contractor is held liable for any component that doesn't align properly or doesn't fit.

6.2 Building works

Not applicable to this contract.

6.3 Civil engineering and structural works

The following codes are applicable for the design and erection of the concrete foundation.

- | | |
|-----------------------|---|
| [1] SANS 10100-1:2000 | The structural use of concrete Part 1: Design. |
| [2] SANS 10100-2:1992 | The structural use of concrete Part 2: Materials and the execution of work. |
| [4] SANS 10144:1995 | Detailing of reinforcement for concrete. |

Concrete works shall be of suitable strength for the purpose, with durability for the minimum 25 years life. Finishing are of-shutter or wood float. All corners to be chamfered 20x20mm. Jointing design and material shall be suitable for the generally high/low temperature conditions on site, to minimize shrinkage and joint failure. Resealing of the joints shall be nit more often than once every 5 years.

The *Contractor* shall engage a competent Qualified Person (Professional Engineer) experienced in the design of foundations of industrial buildings and heavy machinery to be fully responsible for the design and supervision of the construction of the civil works within the *Contractors* scope of works.

All civil engineering construction work shall comply with the requirements of SANS 1200: Standard Specification for Civil Engineering Construction.

The *Employer* shall carry out a check on the setting of all embedded parts within this scope of supply prior to concreting of the relevant structures. Concreting works shall not proceed until this check has been carried out.

6.4 Electrical & mechanical engineering works

The following standards are applicable for the supply, delivery and commissioning of the scrapper chain feeder. Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

Normative

- [1] 240-163146409 Scraper Chain Feeder Standard.
- [2] Hendrina power station geotechnical investigation

Informative

- [1] 240-150642762, Generation Plant Safety Regulations
- [2] 240-114967625, Operating Regulations for High Voltage Systems
- [3] 240-51999453, Standard Specification for Valve Regulated Lead Acid Cells
- [4] 240-54783039 New MV Motor Technical Schedule A&B
- [5] 240-55714363, Coal Fired Power Stations Lighting and Small Power Installation Standard
- [6] 240-56176097 Electrical cable schedule
- [7] 240-56227443, Requirements for Control and Power Cables for Power stations Standard
- [8] 240-56227516, LV Switchgear Control Gear Assembly Associated Equipment for Voltage 1000V AC and 1500V Standard.

- [9] 240-56356396, Earthing and Lighting Protection Standard
- [10] 240-56356421 Electrical LV Switchgear Schedule
- [11] 240-56536505, Hazardous Locations Standard
- [12] 240-77100923 New LV Motor Technical Schedule
- [13] 240-77301384 Electrical LV Load Schedule
- [14] 240-77302094 Electrical Termination Schedule
- [15] 240-115583001 LV Switchgear Schedule A and B Template
- [16] 240-106365693 Standard for the External Corrosion Protection of Plant, Equipment and Associated Piping with Coatings.
- [17] 474-11542, Generation Plant General Electrical Specification
- [18] ISO 9001 Quality Management Systems.
- [19] SANS 1652 Battery chargers –Industrial Type
- [20] SANS 62271-202, High-voltage switchgear, and control gear Part 202: High-voltage/low-voltage prefabricated substation
- [21] SANS 60146-1-1 Semiconductor converters
- [22] GGSS 0405 Belt Conveyor Systems Specification.
- [23] 240-55864503 Belt Conveyor Mechanical Components Specification.
- [24] 240-55864504 Belt Conveyor Structural Steelwork and Welding Specification.
- [25] 240-55864505 Erection of Belt Conveyor Mechanicals Specification.

Wire ropes, chains and fittings

Wire ropes, chains and fittings to be in accordance to BS 302, BS 463-2, SABS 811, SABS 812 and SABS 813. Eyebolts for lifting to comply with BS 4278. All ropes shall comply to all relevant acts and statutory regulations. Wire ropes and fittings that form stationary part of the machines shall be galvanised.

Access platforms and walkways

Access platforms, walkways and ladders all fitted with handrails to comply with BSS 449. All platforms, gratings etc. fitted directly above the equipment shall be removable to allow access to the equipment. The grating panels to be clipped in position. Handrails and intermediate rails to be fitted to all gangways where a person can fall 1.8m or more. The minimum width for the walkways in 750mm. No structure shall restrict up to a height of 2300mm on the walkways.

Guards and safety requirements

The contractor to make necessary arrangements to guard or make all safe openings in floors e.g. hoist wells, conveyor openings etc. The *Contractor* to ensure that the noise levels of all items are limited to 85db at distance of 1m from a particular item. Guards to be provided in accordance to BS 2890 requirements. Should access to a bearing be restricted, lubrication shall be from a remote point

Cabling

Cables construction is as per the requirements of the *Employer* 240-562277443 and SABS 1339 and 1411 standard specifications. Cable installation is in accordance with the *Employer's* standard specification 240-562277443, manufacturers, and systems fault requirements. Cables are selected in accordance with the application (unarmoured cables on racking, armoured cables in ground). Cable racks are earthed in accordance with the Earthing System Specification (240-56356396).

Power and control cables are installed on different racks. Where cable trays for process control cables are less than 1m from power cables, these are closed by means of galvanized sheet steel covers. Wherever cables pass through holes or slots in floors and walls or enter or leave sleeve pipes in floors or walls, the openings are sealed with an SABS/SANS approved fireproof plaster or other accepted material with a two (2) hour fire rating. This material is domed or slightly raised towards the centre to prevent the accumulation of water or oil in the seal.

The sealing material is water-resistant and provides a barrier for smoke or toxic fumes. Where cables pass through openings in walls for direct burial in ground, the outside of the seal is made watertight by application of bitumen paint or accepted equivalent before the cable trench is closed. The contractor will require +/- 60 meters of electrical cable for the north incline conveyor plant project, and 50 meters of electrical cable on the south incline conveyor plant project. All control cables and power cables shall be numbered.

Cable terminating

Equipment requiring cabling shall be designed to allow easy cable approaches, accommodating cable bending radii of approximately 1 000 mm, and provided with removable plates which can be drilled to accommodate the appropriate cable glands. Ample working space and generously dimensioned terminals shall be provided to accommodate cable cores.

All control cables are connected on spring loaded terminals.

Electrical motors

Electric motors shall comply with Eskom's Standard 240-57617975 (New Low Voltage Motors Procurement).

Induction motors performance requirements and information

Motor is type S3 duty cycle. The motor is of type H insulation.

Motor enclosures

The motor enclosure is IP55 rated. Please note that the Host/ Winch system will be subjected to a coal dust environment.

Electrical equipment panel

The IP rating of the electrical panel is IP55 rated. The panel must be spray painted orange.

Low voltage switchgear and control gear is in accordance with 240-56227516 (LV Switchgear and Control Gear) and 240-56227516 (LV switchgear standards).

Earthing

All earthing is in accordance with 240-56356396 (Earthing and Lighting Protection)

Supply

Eskom will supply a 380-volt 3 phase supply point. More detail will be provided as soon as the design options are supplied by the contractor.

Electrical Drawings

All drawings must be drawn from scratch using Micro-Station. It must not be converted to Micro-Station format.

Operating and maintenance manuals

The *Contractor* provides three sets of manuals, which meet the requirements of Standard Specification HSPHM/017. The Standard prescribes the type of information that shall be supplied. It also prescribes the Quality of Documentation required to be supplied to the *Employer*. All drawings are to be submitted on a formal transmittal form to Eskom.

6.5 Process control and IT works

Not applicable for this contract

6.6 Other [as required]

7 List of drawings

7.1 Drawings issued by the *Employer*

No drawings have been issued to the *Contractor* by the *Employer*

C3.2 *CONTRACTOR'S WORKS INFORMATION*

This section of the Works Information will always be contract specific depending on the nature of the *works*. It is most likely to be required for design and construct contracts where the tendering contractor will have proposed specifications and schedules for items of Plant and Materials and workmanship, which once accepted by the *Employer* prior to award of contract now become obligations of the *Contractor* per core clause 20.1.

Typical sub headings could be

- a) *Contractor's* design
- b) Plant and Materials specifications and schedules
- c) Other

This section could also be compiled as a separate file.

PART 4: SITE INFORMATION

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

PART 4: SITE INFORMATION

1. General description

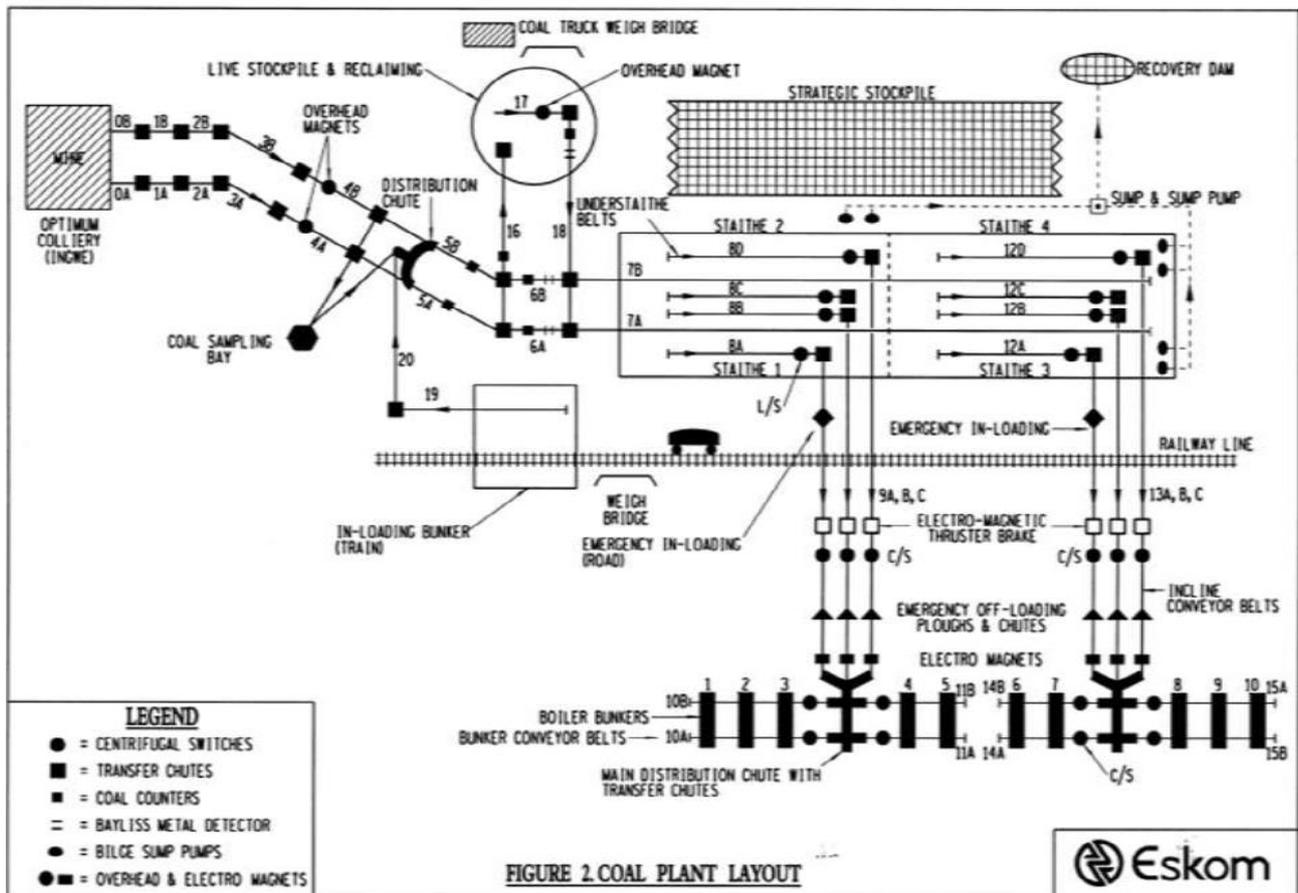
Hendrina Power is a coal fired power station which consist of a total of 10 units with only six operational units out of the 10, generation a total power of 1200 MW.

The Power Station is located in Mpumalanga which east of Johannesburg, South Africa. The distance between Johannesburg and Hendrina is approximately 140 kilometres.

Hendrina Power Station receives coal via trucks only from different mines. The trucks are weighed at the weigh bridge to ensure that the station is bills for the correct amount of coal. The trucks then offload the coal at the coal stock yard (stockpile).

The coal is fed to the conveyor belt via buffalo feeders using front-end loaders to load the coal on the buffalo feeder. The station currently has one buffalo feeder placed on conveyor 4B. The station also feeds coal at conveyor 17 and 18 (where and old buffalo feeder was removed) via chutes. Coal can also be fed at the weighbin which is a bin with a small conveyor belt.

The following diagram shows the arrangement of the conveyor belts from the coal stockyard to the coal bunkers.



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

The conveyor belt is runs under a A-frame roof that protects it from different weather conditions. The existing structure around the conveyor belts were not design for lifting thus it does not have any hook-up points.

3. Subsoil information

Refer to the site geotechnical report which is provided. The contractor shall be fully responsible for undertaking the geotechnical investigation and only use the report as a guideline.

4. Hidden services

Refer to the site geotechnical report which is provided. The contractor shall be fully responsible for undertaking the geotechnical investigation and only use the report as a guideline. There are no drawings available for the hidden services around the area where the work will take place.

5. Other reports and publicly available information

Not available.