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## C3.1: EMPLOYER'S WORKS INFORMATION

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## 1 Description of the works

### 1.1 Executive overview

The scope of the project entails the replacement of the collapsed tower 237 with a new 424A tower, installation of 16 kA OPGW between tower 233 and 241, replacing the damaged earth peak on tower 238 and dismantling the KEMA (ERS) towers and packing and delivery to Beta Substation.

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

The Everest – Makalu 275kV line was constructed from 1956 to 1978. The line is 183.34 km long and is located in the Free State between Welkom (Everest Substation) and Sasolburg (Makalu Substation). The line was designed using KV/10 (A, B, C, D, and Z) tower series.

The scope of work is as follows;

- i) Surveying and pegging of the new tower 237 foundations
- ii) Construction of new T237 foundations
- iii) Supply, assembly and erection of the tower 237 type 424A
- iv) Dressing of the new tower 237
- v) Disconnect phase and earthwire from KEMA and connect to new 424A tower
- vi) Replace earthpeaks on tower 238
- vii) String, regulate and clamp in new OPGW from tower 233 to 241
- viii) Decommission KEMA towers and deliver to Beta Substation.
- ix) The tower and foundations tests e.g pull up testing, concrete cube tests,
- x) Backfill excavation and rehabilitate the area and
- xi) Dispose of the spoils, rubble and other waste generated during construction to registered land fill site

### 1.3 Interpretation and terminology

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
AFC	Approved for construction
OBL	Outside battery limits

## 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:
Inaugural meeting	After safety and	Contractor's Site Office	PM, QS, Site

	environmental files have been audited and approved.		<i>Supervisor, EA, Grid safety and environmental representatives and the Contractor.</i>
Toolbox talk and risk assessment	Daily before work begins.	Contractor's Site Office	<i>Contractor with employees and Site Supervisor.</i>
Risk register and compensation events	As necessary.	Contractor's Site Office	<i>PM, Contractor and Site Supervisor.</i>
Overall contract progress and feedback meeting	Monthly on site.	Contractor's Site Office	<i>PM, Contractor, Site Supervisor, and Grid representatives.</i>

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

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

## 2.2 Documentation control

### 2.2.1 Contractual communication

- All correspondence is to be addressed to the *Project Manager* with a sequential numbering system.
- Properly compiled letters on official Company letterhead or forms attached to an email **and not** as a message in an email itself.

### 2.2.2 Site communication

- Site instruction issued by the *Site Supervisor with instruction from PM.*
- Any communication to be addressed to the PM.
- *Contractor* daily site diary which must be signed daily and be kept up to date at all times.

## 2.3 Health and safety risk management

The Contractor shall control his/her activities and processes in accordance with the Occupational Health & Safety Act No. 85 of 1993, Eskom's Safety, Health, Environmental and Quality Policy 32-727 and Eskom's Contractor Health and Safety Requirements 32-136, Safety, Health and Environment Specification, Baseline Risk Assessment and all other related Eskom and Construction Regulations.

The *Contractor* shall comply with the health and safety requirements contained in Annexure \_\_\_\_\_ to this Works Information.

## 2.4 Environmental constraints and management

The Contractor shall control his activities and processes in accordance with Eskom's Safety, Health, Environmental and Quality Policy 32-727. The Eskom EMP provides for the Aspects and Impacts that will

require management and must be followed strictly during construction of micro-piles foundation of anchors and other additional and related works of the project in the Free State Grid. For tendering purposes, contractor shall prepare a separate mitigation plan for all environmental concerns raised through the EMP and in any other relevant forum such clarification meetings

Any changes to the approved environmental mitigation plan (method statement / EMP) shall be reported and approved by the Grid Environmental Advisor and Project Manager prior to the commencement of work and during construction. The supplier must ensure that all sub-contractors' environmental mitigation plan comply with legal and Eskom requirements and also includes all the environmental risks associated with the scope of work.

In addition, the Contractor is required to ensure that all goods, services or works supplied in terms of this tender also conform to all applicable environment legislation(s), Eskom's Contractor Health and Safety Requirements 32-136, SHE Specification and all other related Eskom and Construction Regulations.

The contractor is to send a flash report for any environmental incidences that has occurred on site as soon as possible or within 24 hours to the SS /Grid Environmental Advisor and PM clearly stating any impact to the environment.

No environmental records shall be destroyed or discarded by the supplier. Eskom and the supplier shall agree that the supplier retains certain environmental records.

Waste generated during construction of the works must be disposed of at a registered site and contractor shall retain records of disposal.

Deviations from these requirements will be regarded as a non-conformance. Should there be concerns regarding environmental performance and non-conformance to environmental requirements, management engagements and interventions will be introduced to determine a means to addressing the shortfalls. Once these interventions have been explored and exhausted, then the Eskom supplier disciplinary process must be followed.

The *Contractor* shall comply with the environmental criteria and constraints stated in Annexure \_\_\_\_\_

## **2.5 Quality assurance requirements**

The Contractor and all sub-contractors shall comply with the requirements listed in the *Employer's* Quality requirement standard, 'Supplier Contract Quality Requirements Specification', document identifier – QM58. The Contractor shall comply with Eskom's Safety, Health, Environmental and Quality Policy 32-727.

The *Employer* places emphasis on the provision of a comprehensive Quality Management System (QMS) for all phases of the project. The QMS of the contractor shall comply with the requirements of ISO 9001. The contractor and all of the contractors' suppliers shall hold a valid certificate of compliance for their QMS to the requirements of ISO 9001:2008. The *Employer* may at his sole discretion carry out an audit on any supplier or sub-supplier's QMS for compliance.

The contractor will appoint a designated individual to function as Project Quality Manager responsible for the overall quality of the work carried out.

The contractor shall develop and submit a Contract/Project Quality Management Plan (CQP) for the contract. This CQP shall describe the project quality requirements and shall also describe the requirement for continued compliance to the requirement of ISO 9001. The contractor may adopt the basics of this document from the ISO 10005:2005 and ISO 10006:2003 normative documents.

Within 4 weeks from contract date, the contractor shall prepare and submit with the CQP also a project Inspection and Test Plan (ITP) for all equipment included in the scope. The project ITP shall detail all

elements of the Works Information (Scope) and shall itemize the required quality levels for each of these components. The *Employer* reserves the right to review and add inspection witness and hold points to the project ITP before approval.

The contractor may not proceed with any work or procurement of material before the contract quality plan and inspection and test plan have been reviewed and approved by the *Employer*.

The contractor shall indicate in the project ITP which items are of a proprietary nature where the level of certification is limited to standard documentation and certificates of conformity. For such items the proprietary specifications may not be inferior to the international standards for such items or the specifications of the *Employer*. The contractor needs to satisfy the *Employer* that the proprietary specifications meet the *Employer* specifications.

All equipment not shown as proprietary equipment in the project ITP shall be designed / manufactured / constructed by an ISO 9001 certified organization. The relevant portions of the project ITP shall be issued to the supplier to ensure that all of the quality requirements are complied with. The contractor shall ensure that the suppliers develop and apply approved quality plans for the design / manufacture / construction / testing / commissioning of the equipment. Each of these quality plans shall be submitted to the *Employer* for review and inclusion of intervention points.

The Contractor will be responsible for all first level quality inspection activities. The *Employer* shall be given the option to participate in all second and third level quality activities.

The contractor shall use only ISO 9001 accredited suppliers for these products. Evidence of ISO 9001 certification shall be supplied with the delivery documentation. Failure to include this certification at the time of delivery shall result in rejection of the equipment by the employer.

The Notification period for Eskom attendance to Witness & Hold points is 72 hours. The Witness & Hold points must be clearly indicated in the work programme submitted at the commencement of the work or after every progress or review meeting. The Site Supervisor will be responsible for the verification and signature of the Quality Inspection and Test Plans (ITPs) which must be maintained by the Contractor and presented for signing promptly and regularly.

## **2.6 Programming constraints**

A comprehensive and fully detailed programme is to be submitted within the seven (7) days after the inaugural meeting and should be in MS Project format, indicating all milestones and critical dates. This programme must first be approved by the Project Manager and must be updated fortnightly or as requested by the Project Manager.

The following dates shall be clearly reflected on the programme:

Starting and completion dates for all activities as well as relevant key dates for hold or witness points. All relevant significant activities shall be shown in order to monitor the progress on site or in the workshop. The programme shall also reflect a 2-week period for inspection and correcting of Defects before the completion date.

Updated programme must be displayed on site office and must be available at all project site meetings reflecting progress to date.

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

The Contractor is to submit an organogram showing all key people involved in the contract 7 days after contract award.



All key personnel must be appointed in writing, must be current for the specific site and area of work and must be kept on file at all times.

## 2.8 Invoicing and payment

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

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

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

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

## 2.9 Insurance provided by the *Employer*

As stated in "Format A" available on [http://www.eskom.co.za/live/content.php?Item\\_ID=9248](http://www.eskom.co.za/live/content.php?Item_ID=9248). (See Annexure B for basic guidance).

## 2.10 Contract change management

Where standard forms are available they should be used.

## 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*

The *Contractor* is to keep proof/invoices of all costs incurred for a compensation event and submit them to the *Project Manager* if requested.

## 2.13 Training workshops and technology transfer

Describe type and frequency of on job training workshops, as well as any obligation for technology transfer being included as part of the contract on Completion of the *works*.

### 3 Engineering and the *Contractor's* design

The content of this section will depend on whether the contract is for construction only with most of the design done by (or for) the *Employer* or whether it is a 'design and construct' contract. ECC provides for design by either Party in any proportion, which proportion done by the *Contractor* must be stated in this part of the Works Information.

#### 3.1 *Employer's* design

Eskom has issued detailed specification on Everest-Makalu 400kV T237 Restoration work. All the work must be carried out as per 240- Everest-Makalu 275kV Tower 237 Permanent Solution Scope of Work.

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

The *Contractor* must design the works as per the Eskom's Standard for the Construction of overhead power lines, 240-47172520 TRMSCAAC1, Rev 5.2.

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

The designs by the *Contractor* must be submitted to Eskom for review and acceptance before commencement of the work.

#### 3.4 Other requirements of the *Contractor's* design

Not applicable.

#### 3.5 Use of *Contractor's* design

The designs from the *Contractor* shall become Eskom property and be used exclusively by the Eskom.

#### 3.6 Design of Equipment

Any new designs of equipment that the *Contractor* is to use to carry out the scope of work must be submitted to Eskom for acceptance, along with all the method statements and safe working procedures for all activities.

#### 3.7 Equipment required to be included in the works

None.

#### 3.8 As-built drawings, operating manuals and maintenance schedules

The *Contractor* is to provide Eskom with detailed "as built" records where deviations have been made from designs within 14 days after Completion.

## 4 Procurement

### 4.1 People

#### 4.1.1 Minimum requirements of people employed on the Site

All people employed on site by the Contractor shall have Police clearance, medicals and Induction before work on site can commence. All people on site must abide by all legislations including COVID-19 and Eskom requirements.

The Contractor's employees shall adhere to Eskom Live Saving Rules at all times.

#### 4.1.2 BBBEE and preferencing scheme

The required B-BBEE Recognition Level is between levels 1 to 2. The Contractor is expected to maintain and improve on the BBBEE status during the contract period. In the event that the contractor downgrades on the BBBEE status during the contract period, the contractor, with SD&L will be expected to rectify the matter within time frames that will be agreed upon.

#### 4.1.3 Supplier Development and Localisation

The *Contractor* complies with and fulfils the *Contractor's* obligations in respect of the Supplier Development and Localisation in accordance with and as provided for in the *Contractor's* SD&L Compliance Schedule stated below:

#### Job Opportunities

Tenderer to indicate number of Jobs to be created and/or retained from this contract;

Number of Jobs to be created	Number of Jobs to be retained

#### Skills Development

Tenderers are required to propose against the following training initiatives;

Category	Eskom Target	Tenderer Proposal
Steel Assemblers	3	

#### **Retention for SD&L Commitments**

- Eskom shall be permitted to retain 2.5% (two and half percent) of the invoices (including VAT) as security for the fulfilment by the suppliers of their SD&L obligations.
- Once Eskom has verified that suppliers have fulfilled their SD & L obligations, the 2.5% retained shall be approved for reimbursement by Eskom to suppliers within 90 (ninety) days of verification by Eskom.

#### **Monitoring and Reporting of SD&L Commitments**

- Suppliers shall on a quarterly basis submit a report to Eskom in accordance with Data Collection Template on their compliance with the SD& L obligations described above.

- b. Eskom shall review the quarterly reports submitted by the suppliers within 60 (sixty) days of receipt of the reports and notify the suppliers in writing if their SD&L obligations have not been met.
- c. Upon notification by Eskom that the suppliers have not met their SD&L obligations, suppliers shall be required to implement corrective measures to meet those SD&L obligations before the commencement of the following quarter, failing which Retention clauses shall be invoked.

Every contract shall be accompanied by the SD&L implementation schedule which must be completed by the suppliers and returned to SD&L representative for acceptance **before** contract award. This will be used as a reference document for monitoring, measuring and reporting on the supplier's progress in delivering on their stated SD&L commitments

The *Contractor* shall keep accurate records and provide the *Project Manager* with reports on the *Contractor's* actual delivery against the above stated SD&L criteria.

The *Contractor's* failure to comply with his SD&L obligations constitutes substantial failure on the part of the *Contractor* to comply with his obligations under this contract.

**NB:** The supplier shall submit SD&L quarterly reports to the project manager.

The contractor must have engagements with local communities so as to address issues pertaining to the project and to avoid disruptions during construction.

## **4.2 Subcontracting**

### **4.2.1 Preferred subcontractors**

The *Contractor* submits the names of each proposed subcontractor to the *Employer* for acceptance. The *Contractor* does not appoint a subcontractor until the *Employer* has accepted him.

### **4.2.2 Subcontract documentation, and assessment of subcontract tenders**

The NEC 3 system is compulsory for all subcontract documentation.

### **4.2.3 Limitations on subcontracting**

According to Eskom Procurement policy, the main contractor shall subcontract minimum of 30% of the total contract as per SD&L requirements.

### **4.2.4 Attendance on subcontractors**

The *Contractor* is responsible for Providing the Works as if he/she had not subcontracted.

## **4.3 Plant and Materials**

### **4.3.1 Quality**

The *Contractor* shall control his activities and processes in accordance with Safety, Health, Environment and Quality Policy 32-727 and SHE Requirement for Commercial Process 32-726 and other additional Eskom requirements and Construction Regulations 2014.

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

- Glass insulators
- OPGW material

#### **4.3.3 Contractor's procurement of Plant and Materials**

The *Contractor* shall comply to document "Quality Assurance for Procurement of Assets, Goods and Services" during the fabrication, supply and delivery of steelwork and reinforcing. The *Contractor* must provide the security for material on site and no security will be provided by Eskom.

Materials required for the work must be ordered in time. Special attention should be paid to permits that are required before any delivery can be made on site. Delays as a result of lack of material will not be acceptable and penalties will be imposed.

Schedules must be updated and forwarded to the Project Manager as per agreement.

#### **4.3.4 Spares and consumables**

Not applicable.

#### **4.4 Tests and inspections before delivery**

The tests must be conducted as per Eskom's Standard for the Construction of overhead power lines, 240-47172520 TRMSCAAC1, Rev 5.2.

#### **4.5 Marking Plant and Materials outside the Working Areas**

The *Contractor* shall mark all equipment, plant and material within the working area.

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

Contractor to supply all equipment required to complete the scope of work, including:

- Vehicles
- Trucks
- Cranes
- Excavation equipment, etc.

#### **4.7 Cataloguing requirements by the Contractor**

State whether cataloguing is applicable, if it is, reference the requirements for cataloguing that need to be satisfied by the *Contractor* (consult Procurement Instruction Number 1 of 2018 – Incorporating Cataloguing into the Procurement Environment, Unique Identifier 240-1289988974).

## 5 Construction

This part of the Works Information addresses constraints, facilities, services and rules applicable to the *Contractor* whilst he is doing work on the Site during the construction and maintenance phase. It does not specify the work itself as that is included in Section 6 of the Works Information.

For contracts involving civil works the approach may be to incorporate SANS1200A or SANS 2000 into the contract. Whilst many of the headings below address the same issues, the list of headings below is more comprehensive. If the headings below are used, it may be prudent to delete paragraphs 3, 4 and 5 from 1200A after checking that their requirements have been included below as necessary. A similar approach can be used in contracts involving building works where the Model Trade Preambles are incorporated. Care should be taken to avoid inconsistency or ambiguity between this part of the Works Information and standard specifications incorporated by reference.

### 5.1 Temporary works, Site services & construction constraints

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

Entry to the site is governed by the Grid's Lines Engineering Assistant and the property owners and the *Contractor* shall adhere to all regulations given. All employees are to sign the Workers declaration on entering and leaving the working area. The property owners must be informed before any work commences.

The *Contractor* must have an Eskom certified and authorized ORHVS person available on site at all times in accordance with Eskom's Construction Safety, Health and Environmental Management 32-136. The authorized ORHVS person is to have a valid first aid certificate. The authorization procedure for a permit to work shall be done before the *Contractor* commences work on site.

It is the *Contractor's* responsibility to ensure that the authorization procedure for a permit to work is obtained before access to the work can be given. The contact person is Mr Francois Du Toit at +27 57 388 2121 and at email address DuToitGF@eskom.co.za to arrange for the authorization.

The *Contractor* will be required to have an Eskom certified and authorized ORHVS person available in each area where work is being performed.

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

Access on site is restricted to the area in which the *Contractor* is working and which has been barricaded. Strictly no movement outside the barricaded working area unless escorted by authorized HV Plant personnel.

The majority of the work is to be performed in the servitude of Everest-Makalu 275kV line and the *Contractor* will take all necessary precautions and work in conjunction with Eskom personnel.

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

The *Contractor* is to supply Eskom with Police clearance for all the employees on site before Work commences. The Basic conditions of employment will be adhered to. Any work done outside this duration must be arranged through the Site Supervisor.

The maximum speed limit on site is 40 km/h.

#### 5.1.4 Health and safety facilities on Site

There are no toilet facilities and water available on site. The *Contractor* is to provide his own toilet facilities on site and ensure that these facilities are kept in a clean condition to Eskom's satisfaction. No work on site will be allowed to commence before the toilet facilities are available on site.

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

The *Contractor* shall control his activities and processes in accordance with Eskom's Construction Safety, Health and Environmental Management 32-136, SHE Specification and all other related Eskom and Construction Regulations.

The *Contractor* shall establish a refuse control system. All waste must be collected and disposed at a registered dumping site as required by Eskom and the Local Authority.

#### **5.1.6 Title to materials from demolition and excavation**

The *Contractor* shall control his activities and processes in accordance with Eskom's Construction Safety, Health and Environmental Management 32-136, SHE Specification

The *Contractor* shall establish a refuse control system. All waste is to be collected and disposed of as required by Eskom and the Local Authority.

#### **5.1.7 Cooperating with and obtaining acceptance of Others**

The *Contractor's* attention is drawn to the fact that Eskom employees will be on site and access and interfacing with them will be required. The *Contractor* shall allow safe access for Eskom personnel when required.

#### **5.1.8 Publicity and progress photographs**

Warning signs and notices must be clearly displayed at all sites where work is taking place. It is the responsibility of the *Contractor* to ensure that all its workers and visitors adhere to all signs.

No photographs are to be taken without the permission of Eskom.

#### **5.1.9 Contractor's Equipment**

All equipment must be registered in the equipment register and as per 32-136. The *Contractor* is responsible for his own insurance and security of his equipment. The *Contractor* is to take stock of his material and equipment on a regular basis and any shortage to be reported to the Project Manager immediately, stating if it is hired or owned.

#### **5.1.10 Equipment provided by the Employer**

Not applicable.

#### **5.1.11 Site services and facilities**

All the water necessary for construction purposes must be provided for by the *Contractor*. It is the *Contractor's* responsibility to test any water before using it for construction purposes. The *Contractor* must submit a Test Certificate for the water used on site.

The *Contractor* shall provide everything else necessary for Providing the Works.

#### **5.1.12 Facilities provided by the Contractor**

The *Contractor* shall provide ablution facilities, first aid and firefighting facilities as required by the Occupational Health and Safety Act.

The *Contractor* supplies all plant and materials required for Providing the Works.

There are no Office or Telephone facilities available on site. The *Contractor* is to provide his own facilities on site and ensure that these facilities are kept in a clean condition to Eskom's satisfaction.

There are no Toilet facilities available on site. The *Contractor* is to provide his own toilet facilities on site and ensure that these facilities are kept in a clean condition to Eskom's satisfaction. No work on site will be allowed to commence before the toilet facilities are available on site.

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

The Work is to be carried out on the servitude of Everest-Makalu 27kV line and the *Contractor* is to take note of the surrounding Farmers' property and Eskom property like towers, conductors, and equipment, etc.

### 5.1.14 Survey control and setting out of the works

The *Contractor* is responsible for setting out the works as per staking table.

### 5.1.15 Excavations and associated water control

All necessary precautions shall be taken to ensure that deep excavations are safe and that the sides are stable, if not they shall be battered. All excavations are to be properly barricaded at all times.

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

Before any excavation commences, it will be the responsibility of the *Contractor* to ascertain from the "Senior Official" the position of any existing services on site. Once these are indicated to the *Contractor* they shall be deemed "known". Any costs incurred for repairs to any "known" services shall be for the *Contractor's* account.

### 5.1.17 Control of noise, dust, water and waste

The *Contractor* shall control his processes and procedures so as to minimise noise and dust. All waste is to be collected and disposed of at registered dumping site as required by Eskom and the Local Authority.

### 5.1.18 Sequences of construction or installation

To be discussed with the appointed *Contractor* before commencement of the works.

### 5.1.19 Giving notice of work to be covered up

The *Contractor* is to give the *Site Supervisor* at least 2 days' notice before covering up the work.

### 5.1.20 Hook ups to existing works

The temporary stays must be installed where required to ensure the stability of the towers at all times.

## 5.2 Completion, testing, commissioning and correction of Defects

### 5.2.1 Work to be done by the Completion Date

**This is mandatory.** Core clause 11.2(2) defines Completion as when the *Contractor* has done all the work which the Works Information states he is to do by the Completion Date. Rather than list all work to be done by the Completion Date, state that all work is to be done by the Completion Date except for [●]. For example:

On or before the Completion Date the *Contractor* shall have done everything required to Provide the Works except for the work listed below which may be done after the Completion Date but in any case before the dates stated. The *Project Manager* cannot certify Completion until all the work except that listed below 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.

	Item of work	To be completed by
	As built drawings of new foundations and the tower.	Within 14 days after Completion
	Performance testing of the works in use as specified in paragraph 1.2 of this Works Information.	See performance testing requirements.



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

Not applicable.

#### **5.2.3 Materials facilities and samples for tests and inspections**

Concrete tests and compaction and other relevant tests will be requested and to be allowed for and provided by the *Contractor*.

#### **5.2.4 Commissioning**

Final inspection shall be conducted and handover be done.

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

None.

#### **5.2.6 Take over procedures**

The *Contractor* must arrange an inspection at least 1 week before completion to inspect and identify any outstanding or incorrect items. The take-over of the Works will be in accordance of NEC ECC3 Completion Certification.

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

Clause 43.4 of the NEC3 shall apply.

The *Contractor* will be responsible for ensuring that the area to be worked in is barricaded before correcting any defects.

#### **5.2.8 Performance tests after Completion**

Not applicable.

#### **5.2.9 Training and technology transfer**

Not applicable.

#### **5.2.10 Operational maintenance after Completion**

Defect period of 52 week applies and it is the responsibility of the contractor to ensure that the area to be worked in is barricaded before correcting any defects.

## 6 Plant and Materials standards and workmanship

### 6.1 Investigation, survey and Site clearance

The works will be performed on the existing line and servitude therefore precaution must be exercised at all times to ensure that there is no damage to the property and environment during construction.

### 6.2 Building works

The work will be performed in the servitude of Everest-Makalu 275kV line from towers 237-242.

### 6.3 Civil engineering and structural works

Title	Date or revision	Tick if publicly available
<b>Eskom Standard Specifications</b>		
Contractor Safety and Health Requirements 32-136	Latest Rev.	✓
Eskom Life-Saving Rules 32-421	Latest Rev.	✓
Safety, Health, Environmental and Quality (SHEQ) Policy 32-94	Latest Rev.	✓
Smoking Procedure 32-36	Latest Rev.	✓
Vehicle and Driver Safety Management 32-93	Latest Rev.	✓
Eskom Vehicle Safety 32-345	Latest Rev.	✓
Working at Heights 32-418	Latest Rev.	✓
32-726 SHE Requirements for Eskom Commercial Process	Latest Rev.	✓
Training, assessment and authorization of persons for the operation & maintenance of the Power System Contractor Safety in a High Voltage Environment	Latest Rev.	✓
TPC41-283 Non Conformance Procedure	Latest Rev.	✓
Occupational Health and Safety Act No. 85 of 1993	Latest Rev.	✓
Supplier Contract Quality Requirements Specification QM58	Latest Rev.	✓
ISO 9001 Quality Management Systems	Latest Rev.	✓
ISO 14001: 2015 Environmental Management System	Latest Rev.	✓
Eskom's Standard for the Construction of overhead power lines, 240-47172520 TRMSCAAC1, rev5.2.	Latest Rev.	✓
240-47411023 Everest - Makalu 275 kV T237 Permanent Solution Scope of work	3	✓
<b>Standardised Specifications</b>		
SABS 1200 Standardised Specification for Civil Engineering Construction		✓
SANS 2001 CC1:2007 Construction Works Part CC1: Concrete Works (structural)		✓
SANS 2001 CS1:2007 Construction Works Part CS1: Structural steelwork		✓
SANS 121 Hot Dip Galvanized Coatings on Fabricated Iron and Steel Articles --Specifications and Test Methods		✓
Earthing Standards 0.54/393		✓
Eskom's Stringing, Cabling, Erection and Earthing Specification for Substations	Rev 0	✓

#### **6.4 Electrical & mechanical engineering works**

The works shall be implemented according to the Eskom Specifications and approved safe work procedures.

#### **6.5 Process control and IT works**

The works shall be implemented according to the Eskom Specifications and approved safe work procedures.

#### **6.6 Other [as required]**

7 List of drawings

7.1 Drawings issued by the Employer

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

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

Drawing number	Revision	Title

## **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.

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