ANNEXURE C3.2: Scope of Work

1. TECHNICAL SPECIFICATIONS

1.1 Locate and identify the size and termination/end point, of the existing medium voltage (MV) 11kV supply cable, feeding from the Eskom substation to the Spiral Mill Incomer. (This cable is estimated to be a 95mm² x 3 core, but has been cut and a portion stolen, and therefore no longer terminates at the Spiral Mill switchgear).

1.2 Supply and install a new 70mm² x 3 core medium voltage (MV) 11kV XLPE cable from the Spiral Mill Incomer cable, to the origin of the overhead line, situated to the South of the Emhlangeni Pipe Fabrication storage facility.

1.3 Supply and install a transition joint between the Spiral Mill Incomer cable and the cable feeding the origin of the overhead line. (95mm² x 3 core to 70mm² x 3 core)

1.4 Supply and install an outdoor 70mm² x 3 core, MV cable termination, for the cable end at the start of the overhead line.

1.5 Test and replace the fuse links and damaged/faulty insulators, on the pole where the overhead line originates/starts.

1.6 Design, supply and install a new overhead line conductor, to replace the damaged middle conductor, from the Emhlangeni Pipe Fabrication Plant side to opposite side of Klip River. The new conductor to be joined to existing conductor.

1.7 Inspect all insulators, poles, conductors, fuse links, and replace as required.

1.8 Design, supply, install and commission two new 50kVA, oil filled 11kV/415V, Dyn11 pole mounted transformers, situated at the Stores as well as the Dairy.

1.9 Allow for cable trenching to Rand Water's specification.

1.10 Supply and install concrete cable route markers, spaced 20m apart and buried a minimum of 300mm below NGL (normal ground level). The cable route markers (figure 1) shall include engraved aluminium labels describing cable type and showing cable direction.

1.11 Re-tape medium voltage and low voltage connections on transformer situated at farmhouses.

1.12 Test all MV cables, including cable joints and terminations, utilizing a Very Low Frequency (VLF) pressure testing unit only.

1.13 Test the entire overhead line installation, up to and including the last termination point.

1.14 Re-tension sagging overhead line conductors at Klip River crossing and elsewhere, as required (figure 2).

1.15 Test low voltage cabling to Stores, Dairy, Rand Water houses (2 off) and office building.

1.16 Replace stolen equipment and circuit breakers in office building distribution board.

1.17 Submit comprehensive test reports and certify the installation safe for energizing and dated photographic evidence.

Figure 1

Figure 2

8. EXISTING INFRASTRUCTURE

Underground service detection is recommended before commencement.

The Supplier to protect and where required make good the existing infrastructure after completion of work. These will be tested after completion of work and only then can invoices be processed.

9. SCHEDULE OF QUANTITIES

PREAMBLE TO THE SCHEDULE OF QUANTITIES AND RATES

a) The Standard Commercial Terms and Conditions, The Special Commercial Terms and Conditions, the Specifications (including the Project Specification), and any Drawings are to be read in conjunction with the Schedule of Quantities and Rates.

b) The Schedule comprises items covering the Service Provider's profit and costs of general liabilities and of the design, manufacture, supply, installation and commissioning of temporary and permanent Works. The Proposer is at liberty to insert a rate of his own choosing for each item in the Schedule and any item against which no quantity (where applicable) or rate is entered will be considered to be covered by other items in the Schedule.

c) The quantities and rates inserted in the Schedule are to be inclusive prices to the Employer for the work described under the several items. Such prices shall cover all costs and expenses that may be required in and for the Works, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the Tender is based. All rates and amount shall be nett, exclusive of Value Added Tax (VAT) and shall be carried to the summary page in their nett form. VAT will then be calculated on the total of the nett amounts.

d) All quantities and rates as set forth and inserted in the Schedule and extended to the totals for each portion of the Schedule, shall be considered as being totally inclusive for the whole of the Works as stipulated, or as can reasonably be inferred from these Documents.

e) All product guarantees are deemed to be included in the rates, and installation and application rates will include all necessary inspections and approvals to maintain guarantees.

f) "Complete" as it is used in the Schedule means the complete system or unit as specified in the particular documents.

g) Each item in the Schedule which is priced, shall be filled in black ink.
h) All quantities shall be considered as final and sufficient for the work described. The Proposer shall satisfy himself as to the sufficiency of quantities <u>but may not change</u>

quantities. Quantities shall be re-measured and payment shall be made according to the adjusted total only.

i) In case of arithmetical errors in the multiplication of rates and quantities in the Proposal, the amount shall not be changed. In case of incorrect summation of amounts in the Proposal, the Lump Sum total shall remain fixed.

7. HEALTH AND SAFETY

Safety during construction is paramount, and the Contractor must adhere to the statutory construction regulations and other regulatory requirements.

The following serves as a guideline to the access and safety scaffolding:

- The successful bidder will be expected to submit the SHE file after the the work has been awarded and accepted. Site hand over van only be scheduled after induction has been concluded.

- All roof structures must be inspected prior to erection of working platforms or scaffolding onto roof structures. Any discrepancies must be reported to the Building Supervisor for assessment.

- **Work platforms:** Adequate and secure work platforms from which to carry out the work are required where necessary.

- **Fall mitigation:** Providing adequate platforms and edge protection may not always be possible or reasonably practicable. If so, safety nets, soft landing systems, or other measures may be necessary to minimise the consequences of any potential injury. If nets are used it must be properly installed by competent riggers as close under the work surface as possible to minimise the distance fallen.

- **Falling material:** A tidy site must be maintained to prevent material which could fall from accumulating. Material may never be thrown from a roof or scaffold, and enclosed rubbish chutes are to be used if lowering material to the ground in containers is not possible. Rubbish chutes must discharge into skips to dispose of spoil material to spoil level.

- Public safety must be maintained throughout, and all scaffolding and pedestrian walkways must be barricaded to prevent accidental or unauthorised access. Where necessary, the contractor must obtain permission from council to barricade sidewalks.