

**LESEDING 400/132kV 500MVA TRANSFORMER 3 CIVIL WORKS**

**PRICING INFORMATION**

**ENQUIRY No.**

[Redacted]

**NAME OF PACKAGE:**

**LESEDING 400/132kV 500MVA TRANSFORMER 3 CIVIL WORKS**

**TENDERER'S NAME:**

[Redacted]

**THE PRICE: IN ZAR**  
(excluding VAT)

**R1 964 900,00**

**RAND VALUE IN WORDS**

[Redacted]

**DATE :**

[Redacted]

Note: All cells locked

## LESEDING 400/132kV 500MVA TRANSFORMER 3 CIVIL WORKS

### PREAMBLES - METHOD OF MEASUREMENT

- 1 The Tenderer is advised to read and understand all aspects and documentation associated with this Enquiry BEFORE inserting his Prices and or Rates and or Amounts.
- 2 The bill of quantities provides the basis of all valuations of the work, price adjustment (CPA) and general progress monitoring.  
  
The amount due at each application for payment is based as measured in terms of the bill of quantities. The Contractor provides all necessary information which is required to determine amounts due at each application for payment relative to the completed works
- 3
- 4 The total of the prices includes for all direct and indirect costs, overheads, profits, on costs, risks, liabilities, obligations, etc. relative to the contract.
- 5 All values are total values prior to any retention and excludes VAT.
- 6 Tenderer to check and take responsibility for all descriptions, formulae and structure of this file.

### A GUIDANCE BEFORE PRICING AND MEASURING

- The NEC's approach to the Preliminary & General (P&G) section of the bill of quantities assumes use will be made of method related charges for project applied to providing the works based on durations shown in the Accepted Programme.
- 1 Fixed charges for the use of Equipment that are required throughout the construction phase, time related charges for people working in a managerial and supervisory capacity for the period required, and lump sum charges for other facilities or services not directly related to performing work items typically included in other parts of the bill of quantities.

### B METHOD OF MEASUREMENT

- 1 The bill of quantities comprises a list of work items and quantities, based on standard methods of measurement, which are either published or stated herein and state the items to be included and how quantities are to be calculated and the items and activities that are deemed to be included within the Rates and Prices inserted by the Tenderer.
- 2 Tenderers shall price the items, taking account all of the information within and associated with the tender documents and shall include for all matters, which are at the Contractors risk.
- 3 All enquiry documents supplied must be considered for pricing the items in the Bills of Quantities for the completion of the works.
- 4 Unless otherwise stated, items are measured net in accordance with the contract drawings, and no allowance has been made for waste or bulking or compaction or evaporation or loss by any means whatsoever.
- 5 The quantities contained in the bill of quantities are provisional shall not be used for ordering purposes. no claims whatsoever, however arising will be entertained, should the bill of quantities have been used for ordering and or procurement purposes

### C RATES AND PRICES

- 1 Rates and Prices shall be expressed to two decimal places (i.e. cents) except in the case of a NIL rate or price.  
  
The Tenderers Rates and Prices shall be inserted in the bill of quantities and are deemed to be fully inclusive Rates and Prices to the Employer for the work described under the several items. Such Rates and Prices shall cover all costs and expenses that may be required in, and for the prompt and efficient and safe execution of the work described, and shall cover the cost of all general risks, liabilities and obligations set forth or implied in this Enquiry document.
- 2
- 3 Rates and Prices for items which are required to be inserted in the bill of quantities by the Tenderer and which have not been duly inserted, are deemed to be covered by other Rates and Prices in the bill of quantities.
- 4 The Tenderers omission to insert Rates and Prices shall not be deemed to be a qualified exclusion to execute such work, activity or responsibility.
- 5 The Rates and Prices are deemed to include (unless otherwise specifically stated in the bill of quantities or herein) all the relevant costs associated with the Clauses of Contract as amended and shall include but not be limited to the following cost components:

- The Tenderer is deemed to have obtained all the necessary information required to adequately price the scope of work associated with this Enquiry and no claim shall be considered resulting from lack of knowledge in this respect.

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 1: PRELIMINARIES AND GENERAL</b>				
		<b>BILL NO. 1</b>				
	SANS 1200A	<b>GENERAL</b>				
	SANS 1200A.8.3	<b>SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS</b>				
1	SANS 1200A.8.3.1 SANS 1200A.8.3.1	<b>CONTRACTUAL REQUIREMENTS</b> Contractual requirements.	Sum	1	R	-
	SANS 1200A.8.3.2	<b>ESTABLISHMENT OF FACILITIES ON SITE</b>				
2	SANS 1200A.8.3.2 SANS 1200A.8.3.2.1a	<b>FACILITIES FOR THE ENGINEER (ON PROJECT MANAGER'S INSTRUCTION)</b> Establishment of the Employer's facilities on site (as per specifications provided by Employer).	Sum	1	R	-
3	SANS 1200A.8.3.2.1c	Name boards.	Sum	1	R	-
	SANS 1200A.8.3.2.2	<b>FACILITIES FOR THE CONTRACTOR (In accordance with Employer and per the project requirements.)</b>				
4	SANS 1200A.8.3.2.2a	Offices and storage sheds	Sum	1	R	-
5	SANS 1200A.8.3.2.2b	Workshops	Sum	1	R	-
6	SANS 1200A.8.3.2.2c	Laboratories	Sum	1	R	-
7	SANS 1200A.8.3.2.2d	Living accommodation.	Sum	1	R	-
8	SANS 1200A.8.3.2.2e	Ablution and latrine facilities	Sum	1	R	-
9	SANS 1200A.8.3.2.2f	Tools and Equipment.	Sum	1	R	-
10	SANS 1200A.8.3.2.2g	Water supplies, electric power, and communication	Sum	1	R	-
11	SANS 1200A.8.3.2.2h	Dealing with water	Sum	1	R	-
12	SANS 1200A.8.3.2.2j	Plant.	Sum	1	R	-
	SANS 1200A.8.3.3	<b>OTHER FIXED-CHARGE OBLIGATIONS</b>				
13	SANS 1200A.8.3.3	Complying with NTCSA's Health and Safety requirements as outlined in the Works Information and all statutory requirements (refer to the Health and Safety requirements annexure).	Sum	1	R	-
14	SANS 1200A.8.3.3	Complying with NTCSA's Environmental requirements as outlined in the Works Information and all statutory requirements (refer to the Environmental requirements annexure).	Sum	1	R	-
15	SANS 1200A.8.3.3	Complying with NTCSA's Quality requirements as outlined in the Works Information and all statutory requirements (refer to the Quality requirements annexure)	Sum	1	R	-
16	SANS1200A.8.3.4 SANS 1200A.8.3.4	<b>REMOVAL OF SITE ESTABLISHMENT</b> Removal of site establishment.	Sum	1	R	-
	SANS 1200A.8.4	<b>SCHEDULED TIME RELATED ITEMS</b>				
17	SANS 1200A.8.4.1	Contractual requirements.	Sum	1	R	-
	SANS 1200A.8.4.2	<b>OPERATION AND MAINTENANCE OF FACILITIES ON SITE, FOR THE DURATION OF CONSTRUCTION EXCEPT WHERE OTHERWISE STATED</b>				
18	SANS 1200A.8.4.2.1 SANS 1200A.8.4.2.1a	<b>FACILITIES FOR THE ENGINEER (ON PROJECT MANAGER'S INSTRUCTION)</b> Employer's facilities on site (as per specifications provided by Employer).	Sum	1	R	-
	SANS 1200A.8.4.2.2	<b>FACILITIES FOR THE CONTRACTOR</b>				
19	SANS 1200A.8.4.2.2a	Offices and storage sheds	Sum	1	R	-
20	SANS 1200A.8.4.2.2b	Workshops	Sum	1	R	-
21	SANS 1200A.8.4.2.2c	Laboratories	Sum	1	R	-
22	SANS 1200A.8.4.2.2d	Living accommodation.	Sum	1	R	-
23	SANS 1200A.8.4.2.2e	Ablution and latrine facilities	Sum	1	R	-
24	SANS 1200A.8.4.2.2f	Tools and equipment.	Sum	1	R	-
25	SANS 1200A.8.4.2.2g	Water supplies, electric power, and communication	Sum	1	R	-

26	SANS 1200A.8.4.2.2h	Dealing with water	Sum	1	R	-	
27	SANS 1200A.8.4.2.2j	Plant	Sum	1	R	-	
	SANS 1200A.8.4.3	<b>SUPERVISION FOR DURATION OF CONSTRUCTION</b>					
28	SANS 1200A.8.4.3	Supervision for duration of construction.	Sum	1	R	-	
	SANS 1200A.8.4.4	<b>COMPANY AND HEAD OFFICE OVERHEAD COSTS FOR DURATION OF THE CONTRACT</b>					
29	SANS 1200A.8.4.4	Company and head office overhead costs for duration of the contract.	Sum	1	R	-	
	SANS 1200A.8.4.5	<b>OTHER TIME-RELATED OBLIGATIONS</b>					
30	SANS 1200A.8.4.5	Complying with NTCSA's Health and Safety requirements as outlined in the Works Information and all statutory requirements (refer to the Health and Safety requirements annexure).	Sum	1	R	-	
31	SANS 1200A.8.4.5	Complying with NTCSA's Environmental requirements as outlined in the Works Information and all statutory requirements (refer to the Environmental requirements annexure).	Sum	1	R	-	
32	SANS 1200A.8.4.5	Complying with NTCSA's Quality requirements as outlined in the Works Information and all statutory requirements (refer to the Quality requirements annexure)	Sum	1	R	-	
33	SANS 1200A.8.4.5	Security for the works as outlined in the Works Information and all statutory requirements for the duration of the contract.	Sum	1	R	-	
34	SANS 1200A.8.4.5	Contractor's transport	Sum	1	R	-	
	SANS 1200A.8.7	<b>DAYWORKS</b>					
35	SANS 1200A.8.7	Transport of equipment/material from stores to site including labour on the Project Manager's instruction.	km	4000	R	-	
<b>TOTAL Carried forward to SUMMARY</b>						R	-

## LESEDING 400/132kV 500MVA TRANSFORMER 3 CIVIL WORKS

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 2: CIVIL WORKS</b>				
		<b>BILL NO. 1</b>				
		<b>DEMOLITIONS</b>				
		<p>1. Note : The following bills in this section , have been measured according to the "SABS 1200 System for Measuring Civil Works" as published by the SABS. All quantities are provisional and subject to remeasurement during the project.</p> <p>2. For pricing purposes all items are to be read in conjunction with the tender drawings. No additional compensation will be made for any information shown on the drawings but not mentioned in the Bills of Quantities - the drawings take precedence over the Bills of Quantities.</p>				
1		<b>REMOVAL OF EXISTING WORK</b>				
		<u>Concrete embankment</u>				
1,1		Breaking up and removing existing concrete revertment wall, complete.	Sum	1		R -
1,2		Breaking up and removing existing geo-cell concrete cut-off drain complete, including diverting from existing staywire.	Sum	1		R -
1,3		Fill the area where the cut-off drain was removed with imported selected fill material in layers not exceeding 150mm after compaction, compacted to a minimum of 95% Mod. AASHTO maximum dry density at Optimum Moisture Content (OMC).	m <sup>3</sup>	66		R -
<b>TOTAL Carried forward to SUMMARY</b>						R -

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 2: CIVIL WORKS</b>				
		<b>BILL NO. 2</b>				
		<b>BULK EARTHWORKS (PROVISIONAL)</b>				
		1. Note : The following bills in this section , have been measured according to the "SABS 1200 System for Measuring Civil Works" as published by the SABS. All quantities are provisional and subject to remeasurement during the project.				
		2. For pricing purposes all items are to be read in conjunction with the tender drawings. No additional compensation will be made for any information shown on the drawings but not mentioned in the Bills of Quantities - the drawings take precedence over the Bills of Quantities.				
		3. All 'Imported Material' for earthworks will be obtained from a commercial source, as selected by the contractor and shall be regarded as freehaul.				
		4. All surplus excavated material is to be disposed of at a registered, designated dumping site, as selected by the Contractor, which cost is to include for all sundry charges, royalties, etc.				
		5. All cut and fill materials will be regarded as freehaul, ie. haulage, loading and offloading of material shall be included in the rates submitted by the Contractor - NO additional compensation whatsoever shall be entertained, or additional monies paid in this regard.				
2	SANS 1200C	<b>SITE CLEARANCE</b>				
	SANS 1200C.8.2.1	<b>Clear and grub</b>				
2,1		Clearing the surface, dense vegetation, grubbing of trees and destumping, cutting trunks, branches, demolishing, etc. including removing, transporting and disposing	m <sup>2</sup>	15 587		R -
3	SANS 1200D	<b>EARTHWORKS</b>				
	SANS 1200D.8.3.1	<b>Site preparation</b>				
3,1	SANS 1200D.8.3.1.2	Remove topsoil to nominal depth of 150mm, stockpile & maintain (excessive roots to be removed by harrow and raking).	m <sup>3</sup>	2 338		R -
		<b>Stockpile and maintain for later re-use</b>				
3,2		Rip-insitu surface to a nominal depth of 150mm and compact to a minimum of 93% of Mod AASHTO density at OMC., including working in confined areas.	m <sup>3</sup>	2 338		R -
		<b>Weedkillers, insecticides, etc.</b>				
3,2		Supply and apply approved weedkiller to terrace, in strict accordance with the Manufacturer's instructions.	m <sup>2</sup>	15 587		R -
		<b>Cut and Fill</b>				
4	SANS 1200D.8.3.2	<u>Bulk excavation</u>				
4,1	SANS 1200D.8.3.2a	Excavate in all materials and stockpile. and dispose to a site provided by the Contractor.	m <sup>3</sup>	8 400		R -
4,2	SANS 1200D.8.3.2a	Over-excavate clay to spoil to a minimum of 2m below final terrace level and dispose to a site provided by the Contractor.	m <sup>3</sup>	28 000		R -
	SANS 1200D.8.3.2b	<b>Extra over all excavations to all depths for</b>				
4,4	SANS 1200D.8.3.2b.1	Intermediate excavation.	m <sup>3</sup>	14 560		R -
4,5	SANS 1200D.8.3.2b.2	Hard rock excavation.	m <sup>3</sup>	4 200		R -
4,6	SANS 1200D.8.3.2b.3	Boulder excavation (including blasting and breaking down of all rock material to rocks / stones of manageable size).	m <sup>3</sup>	1 400		R -
	SANS 1200D.8.3.4	<b>Importation of materials</b>				
	SANS 1200D.8.3.4a	<b>Importing material from commercial sources, borrow pits or stockpile</b>				
4,8		Imported (G7) material from commercial sources to form terrace, in level layers of 150mm thick, material compacted to 93% Mod AASHTO density at OMC	m <sup>3</sup>	22 050		R -
4,9		Imported (G6) material from commercial sources to form terrace, in level layers of 150mm thick, material compacted to 93% Mod AASHTO density at OMC	m <sup>3</sup>	2 970		R -

4,10		Gravel wearing course (G5) 150mm thick imported from commercial source and compacted to 95% of Mod AASHTO density at OMC	m³	2 970		R	-
4,11		Modified AASHTO density test (Provisional).	No.	150		R	-
5		<b>THE FOLLOWING IN 'GEO-CELL' LINING TO EMBANKMENT</b>					
	SANS 1200D	<b>EARTHWORKS</b>					
	SANS 1200D.8.3.3	<b>Restricted excavation</b>					
5,1	SANS 1200D.8.3.3a	Excavate in all materials and use for backfilling or dispose for ground anchor beams to suit the edges of the "Geo-Cell" mattress.	m³	978		R	-
	SANS 1200D.8.3.2b	<b>Extra-over for</b>					
5,2	SANS 1200D.8.3.2b.1	Intermediate excavation.	m³	587		R	-
		<b>Weedkillers, insecticides, etc.</b>					
5,3		Supply and apply approved weedkiller to the underside of 'Geo-Cell' mattress, all in strict accordance with the manufacturer's instructions.	m²	4 075		R	-
6	SANS 1200DK	<b>GABIONS AND PITCHING</b>					
	SANS 1200DK.8.2.4	<b>Geotextile/Geomembrane</b>					
6,1		75mm Hyson cells mattress to sides of embankment, filled with and including 20MPa mass concrete, vibrated and compacted to fill voids, to form even and level finished surface, including suitably anchored into underlying compacted material with 10mm diameter steel pegs at 1m centres in all directions, and casting in ends of mattress to ground anchor edge beams along top and bottom of embankment, all to the satisfaction of the Eskom Project Manager.	m³	306		R	-
6,2		Correction gravel layer in 150mm layer to sides of embankment suitably levelled and compacted	m³	611		R	-
6,3		Berm fill gravel layer in 150mm layer to sides of embankment suitably levelled and compacted	m³	611		R	-
7	SANS 1200G	<b>CONCRETE (STRUCTURAL)</b>					
	SANS 1200G.8.2	<b>Formwork</b>					
	SANS 1200G.8.2.4	<u>Special off-form</u>					
7,1		Form 20 x 20mm chamfer along exposed top edge of ground anchor block.	m	815		R	-
	SANS 1200G.8.4	<b>Concrete</b>					
	SANS 1200G.8.4.1	<u>Concrete strength 25MPa/ 19mm concrete</u>					
7,2		200 x 200mm Ground anchor block.	m³	33		R	-
	SANS 1200G.8.4.4	<b>Unformed surface finishes</b>					
7,3	SANS 1200G.8.4.4a	Wood floated finish to top of ground anchor block not exceeding 300mm wide.	m	815		R	-
8		<b>THE FOLLOWING IN GRASS-LINED EMBANKMENTS AT EDGE OF TERRACE</b>					
	SANS 1200D	<b>EARTHWORKS</b>					
	SANS 1200D.8.3.10	<b>Topsoiling</b>					
8,1		Imported approved topsoiling from commercial sources in 100mm (average) thick layer to compacted areas.	m³	82		R	-
	SANS 1200D.8.3.11	<b>Grassing, etc.</b>					
8,2		Approved grass with a seed/gel mixture of <i>Erragrostis Teff</i> , <i>Erragrostis Curvula</i> , and <i>Cynodon Dactylon</i> , all in equal proportions at 8kg/ha, covered with Terrasafe "500" Natural geotextile laid in strict accordance with the Supplier's instructions and to the satisfaction of the NTCSA Project Manager.	m²	815		R	-
8,3		All new grassed areas must be watered at least twice a week, to ensure the proper germination of the seeds. Watering of grassed areas is to be carried for the entire duration of the contract. The Contractor shall also allow for the repair of any erosion damage and to replant bare patches (should these occur), so as to achieve acceptable cover.	Sum	1		R	-
9		<b>PROVISIONAL SUMS</b>					
9,1		<b>BUDGETARY ALLOWANCES</b>					
9.1.1		Provide a Provisional Sum amount of R 450 000,00 (Four Hundred and Fifty Thousand Rands) for bulk earthworks (Used at the Project Manager's instruction).	Sum	1	R 450 000,00	R	450 000,00

<b>TOTAL Carried forward to SUMMARY</b>	<b>R 450 000,00</b>
---	---------------------

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 2: CIVIL WORKS</b>				
		<b>BILL NO. 3</b>				
		<b>ACCESS AND TERRACE ROADS (PROVISIONAL)</b>				
1		<b>THE FOLLOWING IN 6M WIDE CONCRETE TERRACE ROAD</b>				
	SANS 1200D	<b>EARTHWORKS</b>				
	SANS 1200D.8.3.3	<b>Restricted Excavation</b>				
	SANS 1200D.8.3.3a	<b>Restricted excavation in all materials and dispose to a site provided by the Contractor</b>				
1,1		Reduced levels under floors.	m <sup>3</sup>	144	R	-
	SANS 1200DM.8.3.3	<b>Treatment of road - bed</b>				
	SANS 1200DM.8.3.3a	<b>Roadbed preparation and compaction of material</b>				
1,2		Rip insitu to a depth of 300mm and minimum of 90% Mod. AASHTO maximum density.	m <sup>3</sup>	86	R	-
1,3		To a depth of 150mm and minimum of 95% Mod. AASHTO maximum density.	m <sup>3</sup>	108	R	-
1,4		To a depth of 150mm and minimum of 93% Mod. AASHTO maximum density.	m <sup>3</sup>	108	R	-
		<b>Testing and taking of samples</b>				
1,5		Modified AASHTO density test (Provisional).	No.	20	R	-
		<b>Supply and apply weedkiller</b>				
1,6		Supply and lay approved weedkiller in strict accordance with the Manufacturer's instructions.	m <sup>2</sup>	720	R	-
	SANS 1200G	<b>CONCRETE (STRUCTURAL)</b>				
	SANS 1200G8.2.4	Special off-form				
1,7		Form 25 x 25mm Chamfered edge along exposed top edge of concrete.	m	209	R	-
	SANS 1200G.8.2.6	<b>Box out holes / form voids</b>				
1,8	SANS 1200G.8.2.6a	Box out to form circular hole to suit 300mm diameter precast concrete pipe (elsewhere measured) in 200mm thick concrete wall.	No.	5	R	-
	SANS 1200G.8.3	<b>Reinforcement</b>				
	SANS 1200G.8.3.2	<b>High tensile welded mesh</b>				
1,9		High tensile welded mesh reference 500 to apron slab and walls.	m <sup>2</sup>	720	R	-
		<b>Blinding layer in 15MPa/ 19mm concrete</b>				
1,10		50mm thick blinding	m <sup>3</sup>	36	R	-
	SANS 1200G.8.4.3	<b>Strength concrete, 30MPa/19mm in</b>				
1,11		Road.	m <sup>3</sup>	144	R	-
	SANS 1200G.8.4.4	<b>Unformed surface finishes</b>				
1,12	SANS 1200G.8.4.4a	Wood - floated finish.	m <sup>2</sup>	720	R	-
	SANS 1200G.8.5	<b>Joints</b>				
1,13		Longitudinal joint' through 200mm thick concrete including dowels, saw-cut, bond-breaker, silicone sealant, etc.,	m	160	R	-

1,14	Construction joint' through 200mm thick concrete including dowels, saw-cut, bond-breaker, silicone sealant, etc., complete, all as detailed on drawing 0.54/390 sheet 38a1.	m	120	R -
1,15	Saw cut joint 10mm wide x 40mm deep in top surface of concrete, to take 10mm diameter copper earth wire (elsewhere measured), including filling saw cut completely with non-shrink grout to Engineer's specification and satisfaction (Provisional).	m	120	R -
1,16	<p><b>SLEEVE PIPES</b></p> <p><b>Supply, lay, joint, bed and prove duct with nominal 2mm diameter draw wires, including blocking off ends</b></p> <p>Set of 3no x 160mm diameter Kablflex sleeve pipes laid according to NTCSA Project Manager's requirements/ instructions.</p>	m	52	R -
	<b>Total Carried forward</b>			<b>R -</b>

						<b>Total Brought forward</b>	<b>R</b>	-
2		<b>THE FOLLOWING IN 6M WIDE MAIN ASPHALT ACCESS ROAD</b>						
	SANS 1200C	<b>SITE CLEARANCE</b>						
		<b>Clear site</b>						
2,1	SANS 1200C.8.2.8	Break down and remove the existing 6m wide asphalt access road including carting away to a registered dumping site.	m	610		R	-	
	SANS 1200DM.8.3.2	<b>Preparation of site</b>						
2,2	SANS 1200DM.8.3.2a	Preparation and stripping of site/removal of topsoil to 150mm deep, stockpiling and maintaining.	m³	838		R	-	
	SANS 1200DM.8.3.3	<b>Treatment of road - bed</b>						
	SANS 1200DM.8.3.3a	<b>Roadbed preparation and compaction of material</b>						
2,3		Rip and recompact insitu to a depth of 150mm and minimum of 90% Mod. AASHTO maximum density.	m³	824		R	-	
	SANS 1200DM.8.3.4	<b>Cut to fill</b>						
2,4	SANS 1200DM.8.3.4a	Cut to fill and compact to 90% of Mod.AASHTO maximum density.	m³	824		R	-	
	SANS 1200DM.8.3.7	<b>Cut to spoil or stockpile</b>						
2,5	SANS 1200DM.8.3.7b	Intermediate excavation.	m³	825		R	-	
		<b>Testing and taking of samples</b>						
2,6		Modified AASHTO density test (Provisional).	No.	153		R	-	
		<b>Supply and apply weedkiller</b>						
2,7		Supply and lay approved weedkiller in strict accordance with the Manufacturer's instructions.	m²	5 490		R	-	
	SANS 1200ME	<b>SUBBASE</b>						
2,8	SANS 1200ME.8.3.1	150 mm thick subbase imported gravel stabilized with 3% cement and compacted to a minimum of 95% Mod. AASHTO maximum density.	m³	824		R	-	
2,9	SANS 1200ME.8.3.3	Construct the subbase course/ shoulders/ gravel wearing course with material from commercial sources and compacted to a minimum of 93% Mod.AASHTO maximum density.	m³	275		R	-	
	SANS 1200MF	<b>BASE</b>						
	SANS 1200MF.8.3.3	<b>Construct base with material from commercial sources or designated borrow pits</b>						
2,10	SANS 1200MF.8.3.3a	150 mm thick selected subgrade imported gravel constructed using natural gravel material imported from commercial sources and compacted to a minimum of 93% Mod. AASHTO maximum density.	m³	824		R	-	
2,11	SANS 1200MF.8.3.3c	150 mm thick base graded crushed stone compacted to a minimum of 88% Apparent density.	m³	549		R	-	
		<b>Sundries</b>						
2,12		Allow for intersection with existing road, including tying in all layers, to form consistent and even finished surface.	m	29		R	-	
2,13		Extra over to allow for levelling of intersection of existing and new road (6m wide) including tying in all layers, to form consistent and even finished surface.	m	29		R	-	
	SANS 1200MH.8.5.4	<b>Asphalt</b>						
2,14		Apply 40mm pre mix asphalt including 0.71/m² prime.	m²	3 660		R	-	
		<b>Total Carried forward</b>				<b>R</b>	<b>-</b>	

<b>Total Brought forward</b>						<b>R</b>	-
3		<b>POTHoles AND CRACKS REPAIR</b>					
	SANS 1200C	<b>SITE CLEARANCE</b>					
		<b>Clear site</b>					
3,1	SANS 1200C.8.2.8	Break down and remove the existing asphalt access road including carting away to a registered dumping site.	m	300	R	-	
	SANS 1200D	<b>EARTHWORKS</b>					
	SANS 1200D.8.3.3	<b>Restricted Excavation</b>					
3,2	SANS 1200D.8.3.3a	Excavate in all materials for holes to depth not exceeding 1m deep and dispose of surplus material.	m <sup>3</sup>	270	R	-	
	SANS 1200D.8.3.2b	<b>Extra over for</b>					
3,3	SANS 1200D.8.3.2b.1	Intermediate excavation.	m <sup>3</sup>	135	R	-	
	SANS 1200MH	<b>ASPHALT BASE AND SURFACING</b>					
	SANS 1200MH.8.5.3	<b>Tack coat</b>					
3,6		Spray surface using stable grade emulsion.	m <sup>2</sup>	810	R	-	
	SANS 1200MH.8.5.4	<b>Asphalt</b>					
3,7		Potholes and cracks filling with hot mix asphalt in layers not exceeding 50mm thick, compacted to 95% of maximum theoretical density	m <sup>2</sup>	450	R	-	
	SANS 1200MM.8.3.6	<b>Supply and erect completely statutory signs, street names, etc.</b>					
3,8		Stop sign (R1)	No.	1	R	-	
3,9		Side road junction - left (W107)	No.	1	R	-	
3,10		Side road junction - right (W108)	No.	1	R	-	
3,11		Speed limit 60 (W201)	No.	1	R	-	
3,12		Stop ahead (W302/104)	No.	1	R	-	
3,13		T - Junction (W104)	No.	1	R	-	
3,14	SANS 1200MM.8.4.1	<b>Non-reflectORIZED paint applied at a nominal rate of 0,42 l/m2 as scheduled</b>					
3,15	SANS 1200MM.8.4.1	<b>Supply all materials and equipment necessary and for painting and protection for</b>					
3,16	SANS 1200MM.8.4.1a	White lines - 100mm wide broken or unbroken line.	km	0,90	R	-	
3,17	SANS 1200MM.8.4.1b	Yellow lines - 100mm wide broken or unbroken line.	km	0,50	R	-	
<b>TOTAL Carried forward to SUMMARY</b>						<b>R</b>	-

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 2: CIVIL WORKS</b>				
		<b>BILL NO. 4</b>				
		<b>BASE FOUNDATIONS</b>				
	SANS 1200D	<b>EARTHWORKS</b>				
	SANS 1200D.8.3.3	<b>Restricted Excavation</b>				
1	SANS 1200D.8.3.3a	Excavate for restricted foundations, in all materials and use for backfill or dispose to a site provided by the Contractor (includes over-excavation).	m <sup>3</sup>	2924	R	-
		<b>Testing and taking of samples</b>				
2		Modified AASHTO density test (Provisional).	No.	15	R	-
	SANS 1200G	<b>CONCRETE (STRUCTURAL)</b>				
	SANS 1200G.8.2	<b>FORMWORK</b>				
	SANS 1200G.8.2.1	<b>Rough</b>				
3		Sides of base, stub columns.	m <sup>2</sup>	495	R	-
	SANS 1200G.8.2.2	<b>Smooth</b>				
4		Sides of base, stub columns.	m <sup>2</sup>	376	R	-
	SANS 1200G.8.2.4	<b>Special off-form</b>				
5		Form 20 x 20mm chamfer along top edge of exposed stub column.	m	937	R	-
	SANS 1200G.8.3	<b>REINFORCEMENT</b>				
	SANS 1200G.8.3.1	<b>Mild steel reinforcement bars</b>				
6		All diameter bars (Provisional).	t	1,718	R	-
	SANS 1200G.8.3.1	<b>High Tensile steel reinforcement bars:</b>				
7		All diameter bars (Provisional).	t	26,793	R	-
	SANS 1200G.8.4	<b>CONCRETE</b>				
	SANS 1200G.8.4.2	<b>Blinding layer in 15MPa/ 19mm concrete</b>				
8		50mm thick blinding	m <sup>3</sup>	121	R	-
	SANS 1200G.8.4.3	<b>Concrete strength 25MPa/ 19mm concrete</b>				
9		Bases and stubs.	m <sup>3</sup>	398	R	-
	SANS 1200G.8.4.4	<b>Unformed surface finishes</b>				
10	SANS 1200G.8.4.4a	Wood floated finish on top surface of bases and stub, including working in confined areas.	m <sup>2</sup>	730	R	-
		<b>Concrete Test cubes</b>				
11		Making and testing 150 x 150mm concrete strength test cube (Provisional)	No.	30	R	-
	SANS 1200G.8.7	<b>GROUTING</b>				
	SANS 1200G.8.7a	<b>Under bases:</b>				
12		Non-shrink, non-metallic, free-flowing 35MPa grouting under base plates.	m <sup>3</sup>	1	R	-
	SANS 1200G.8.8	<b>HOLDING DOWN BOLTS AND MISCELLANEOUS METAL WORK</b>				
13		Provide and install Grade 4.8 M24 X 400mm long galvanized mild steel bolt, threaded at exposed end and fitted with suitable nut and washer, including anchor plate welded on at other end, bolt cast into concrete plinth, stub column or base, in exact position.	t	0,008	R	-

14	Provide and install Grade 4.8 M24 X 460mm long galvanized mild steel bolt, threaded at exposed end and fitted with suitable nut and washer, including anchor plate welded on at other end, bolt cast into concrete plinth, stub column or base. in exact position.	t	0,130	R	-
15	Provide and install Grade 8.8 M24 X 650mm long galvanized mild steel bolt, threaded at exposed end and fitted with suitable nut and washer, including anchor plate welded on at other end, bolt cast into concrete plinth, stub column or base. in exact position.	t	0,375	R	-
16	Provide and install Grade 4.8 M24 X 700mm long galvanized mild steel bolt, threaded at exposed end and fitted with suitable nut and washer, including anchor plate welded on at other end, bolt cast into concrete plinth, stub column or base, in exact position.	t	2,850	R	-
17	Provide and install Grade 8.8 M30 X 750mm long galvanized mild steel bolt, threaded at exposed end and fitted with suitable nut and washer, including anchor plate welded on at other end, bolt cast into concrete plinth, stub column or base. in exact position.	t	0,020	R	-
	<b>SUNDRIES</b>				
18	Junction box foundation complete as per 'detail on drawing 0.54/4713 complete 'including all excavations, backfilling, concrete, 'holding down bolts, etc.	No.	4	R	-
19	Plug box foundation complete as per detail 'on drawing 0.54/710 complete 'including all excavations, backfilling, 'concrete, holding down bolts, etc.	No.	1	R	-
20	Label support foundation complete as per detail on drawing 0.54/401 complete including all excavations, backfilling, concrete, holding down bolts and all accessories.	No.	1	R	-
<b>TOTAL Carried forward to SUMMARY</b>				<b>R</b>	<b>-</b>

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 2: CIVIL WORKS</b>				
		<b>BILL NO. 5</b>				
		<b>MICROPILING (PROVISIONAL)</b>				
	SABS 1200F	<b>PILING</b>				
	SANS 1200F 8.2.1.	<b>Establishment of site for piling</b>				
1		Establishment on site for all necessary plant, equipment for the execution of the works and removal thereof on completion.	Sum	1		R -
	SANS 1200F 8.2.2.	<b>Moving to and setting up the equipment at each position for drilling and pile installation</b>				
2		Tubular Busbar support foundations	No	10		R -
3		24m Lighting mast support foundations	No	2		R -
4		400kV Columns foundations	No	6		R -
	SANS 1200F 8.2.4.	<b>Auger or Bore holes for piles of 150mm diameter through material situated in the following successive depth ranges:</b>				
	SANS 1200F 8.2.4.a	Over 0m and up to 10m				
5		Tubular Busbar support foundations	m	1200		R -
6		24m Lighting mast support foundations	m	80		R -
7		400kV Columns foundations	m	240		R -
	SANS 1200F 8.2.5.	<b>Extra over</b>				
8	SANS 1200F 8.2.5.a	Coarse gravel	m	760		R -
9	SANS 1200F 8.2.5.b	Boulders	m	304		R -
10	SANS 1200F 8.2.5.c	Rock formation	m	152		R -
	SANS 1200F 8.2.6.	<b>Drive temporary casing for driven displacement piling systems to form holes for piles of 150mm diameter through material situated in the following successive depth ranges</b>				
	SANS 1200F 8.2.6.a	<u>Over 0m and up to 10m</u>				
11		Tubular Busbar support foundations	m	1200		R -
12		24m Lighting mast support foundations	m	80		R -
13		400kV Columns foundations	m	240		R -
	<b>SANS 1200F 8.2.13.</b>	<b>Extra -over for socketing piles into rock formation</b>				
14		Tubular Busbar support foundations	m	360		R -
15		24m Lighting mast support foundations	m	24		R -
16		400kV Columns foundations	m	72		R -
	SANS 1200F 8.2.14.	<b>Install and remove temporary casings in augered holes as directed in writing for piles on 150mm diameter</b>				

17		Tubular Busbar support foundations	No	120		R	-
18		24m Lighting mast support foundations	No	8		R	-
19		400kV Columns foundations	No	24		R	-
	SANS 1200F 8.2.15.	<b>Install permanent pile casings as per details on the drawing.</b>					
20		Tubular Busbar support foundations	m	120		R	-
21		24m Lighting mast support foundations	m	8		R	-
22		400kV Columns foundations	m	24		R	-
	SANS 1200F 8.2.16.	<b>Steel reinforcement in cast-in situ piles</b>					
23		Tubular Busbar support foundations	t	21,298		R	-
24		24m Lighting mast support foundations	t	1,420		R	-
25		400kV Columns foundations	t	4,260		R	-
	SANS 1200F 8.2.17.	<b>Concrete for in cast-in situ piles, underreams, bulbous bases and sockets, 25MPa</b>					
26		Tubular Busbar support foundations	m³	23		R	-
27		24m Lighting mast support foundations	m³	2		R	-
28		400kV Columns foundations	m³	5		R	-
	SANS 1200F 8.2.20.	<b>Strip/Cut pile heads</b>					
29		Tubular Busbar support foundations	No	120		R	-
30		24m Lighting mast support foundations	No	8		R	-
31		400kV Columns foundations	No	24		R	-
		<b>LOAD TESTING OF PILES</b>					
	SANS 1200F 8.2.21.	<b>Establishment of site for load testing of piles</b>					
32		Establishment on site for all necessary plant, equipment for the execution of the works and removal thereof on completion.	Sum	1		R	-
	SANS 1200F 8.2.22.	<b>Pile Load Test</b>					
33		Tubular Busbar support foundations	No	4		R	-
34		24m Lighting mast support foundations	No	2		R	-
35		400kV Columns foundations	No	3		R	-
	SANS 1200F 8.2.23.	<b>Additional foundation investigations</b>					
36		Allow for additional foundation investigations on the Project Manager's instruction.	Sum	1		R	-
37		<b>PROVISIONAL SUMS</b>					
37,1		<b>BUDGETARY ALLOWANCES</b>					
37.1.1		Provide a Provisional Sum amount of R 600 000,00 (Six Hundred Thousand Rands) for micropiling works (Used at the Project Manager's instruction).	Sum	1	R	600 000,00	R 600 000,00
<b>TOTAL Carried forward to SUMMARY</b>							<b>R 600 000,00</b>

## LESEDING 400/132kV 500MVA TRANSFORMER 3 CIVIL WORKS

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 2: CIVIL WORKS</b>				
		<b>BILL NO. 6</b>				
		<b>DRAINAGE (PROVISIONAL)</b>				
		<b>THE FOLLOWING IN DRAINAGE PIPING</b>				
	SANS 1200DB	<b>EARTHWORKS FOR SUBSOIL DRAIN (PIPE TRENCHES)</b>				
	SANS 1200DB.8.3.2	<b>Excavation</b>				
1	SANS 1200DB.8.3.2a	Excavate in all materials for trenches to depth not exceeding 1m deep and use for backfill, compact and dispose of surplus material.	m <sup>3</sup>	862	R	-
	SANS 1200DB.8.3.2b	<b>Extra over pipe excavation for</b>				
2	SANS 1200DB.8.3.2b.1	Intermediate excavation.	m <sup>3</sup>	259	R	-
		<b>UPVC PIPES</b>				
3		Supply and install 2 x160 mm diameter UPVC Slotted pipes	m	903	R	-
	SANS 1200G.8.4	<b>Concrete</b>				
	SANS 1200G.8.4.3	Strength concrete, 15MPa/19mm in				
4		Haunching at joints to uPVC pipes.	m <sup>3</sup>	2	R	-
	SANS 1200LB	<b>BEDDING (PIPES)</b>				
	SANS 1200LB.8.2.2	<b>Supply only of bedding by importation</b>				
	SANS 1200LB.8.2.2.3	<b>From commercial sources</b>				
5	SANS 1200LB.8.2.2.3a	Selected granular material (cradle).	m <sup>3</sup>	72	R	-
6	SANS 1200LB.8.2.2.3b	Selected stone material with aggregate size 50 to 75mm nominal diameter, as infill to concrete gutter.	m <sup>3</sup>	722	R	-
7		Supply and lay filter grade geofabric or equal approved geofabric layer.	m <sup>2</sup>	3 431	R	-
	SANS 1200LD	<b>SEWERS</b>				
	SANS 1200LD.8.2.1	<b>Supply, handle and lay Class 50D spigot and socket concrete pipes complete with rubber ring joints on Class B bedding:</b>				
8		300mm Diameter pipe with neoprene rings.	m	140	R	-
	SANS 1200LD.8.2.3	<b>Manholes</b>				
		<b>Brick manhole size 940 x 940mm internally, complete with concrete slab over, step irons, concrete benching and base, excavations, backfilling, carting away of surplus excavated material including all accessories. SABS 558 Type 4 medium duty manhole cover and frame</b>				
9		Manhole with inlets for 160mm uPVC pipes, depth to invert exceeding 2m and not exceeding 4m deep.	No.	25	R	-
10		Fire trap manhole with inlet for 3 no. x 300mm precast concrete pipes (elsewhere measured), depth to invert exceeding 2m and not exceeding 4m deep as per details on drawing.	No.	2	R	-
		<b>Extra over manhole cover for</b>				
11		Type 2A manhole covers.	No.	25	R	-
12		Type 2A heavy-duty manhole covers.	No.	2	R	-
	SANS 1200LD.8.2.7	<b>Encasing of pipes in concrete</b>				
	SANS 1200G.8.4	<b>Concrete</b>				
	SANS 1200G.8.4.3	<b>Strength concrete, 25MPa/19mm in</b>				
13		300mm diameter concrete pipe.	m <sup>3</sup>	12	R	-

14	SANS 1200LD.8.2.11	25mm diameter pipe HDPE CLASS 6.	m³	12	R	-
		<b>Connection to existing sewer</b>				
15		Locate, excavate and break through side of existing brick manhole, including casting in end of 160mm diameter uPVC pipe, grouting around edges to form watertight intersection, any additional concrete benching, making good including all accessories (Provisional).	sum	1	R	-
		<b>Total Carried forward</b>			<b>R</b>	<b>-</b>

					<b>Total Brought forward</b>	<b>R</b>	-
<p><b>THE FOLLOWING IN CONCRETE LINED STORMWATER DRAINAGE CHANNEL ALONG THE SIDES OF THE CONCRETE ROAD (refer to drawing no. 0.54/390 sheet 7)</b></p>							
<p><b>SANS 1200D EARTHWORKS</b></p>							
<p>SANS 1200D.8.3.3 Restricted Excavation</p>							
16	SANS 1200D.8.3.3a	Excavate for stormwater drainage channel in all materials and dispose to a site provided by the Contractor.	m <sup>3</sup>	84	R	-	
<p><b>Extra over for</b></p>							
17		Intermediate excavation.	m <sup>3</sup>	18	R	-	
<p><b>SANS 1200G CONCRETE STRUCTURAL</b></p>							
<p>SANS 1200G.8.2 <b>Formwork</b></p>							
<p>SANS 1200G.8.2.1 <b>Rough</b></p>							
18		Sides of stormwater drainage channel.	m <sup>2</sup>	220	R	-	
<p>SANS 1200G.8.2.2 <b>Smooth</b></p>							
19		Sides of stormwater drainage channel.	m <sup>2</sup>	110	R	-	
<p>SANS 1200G.8.3 <b>Reinforcement</b></p>							
<p>SANS 1200G.8.3.2 <b>High tensile welded mesh</b></p>							
20		Type reference 395 to walls and floor of stormwater drainage channel. With 40mm cover.	m <sup>2</sup>	401	R	-	
<p>SANS 1200G.8.4 <b>Concrete</b></p>							
<p>SANS 1200G.8.4.3 <b>Strength concrete, 25MPa/19mm in</b></p>							
21		Walls and floor of stormwater drainage channel.	m <sup>3</sup>	61	R	-	
<p>SANS 1200G.8.4.4 <b>Unformed surface finishes</b></p>							
22	SANS 1200G.8.4.4a	Wood - floated finish.	m <sup>2</sup>	292	R	-	
<p>SANS 1200G.8.5 <b>Joints</b></p>							
23		20mm thick vertical 'expansion joint' through walls and floor of 150mm thick concrete stormwater drainage channel, including dowels, saw-cut, bond-breaker, silicone sealant, etc., complete, all as per drawing no. 0.54/390 sheet 40.	m	729	R	-	
<p>SANS 1200LB.8.2.2 <b>Supply only of bedding by importation</b></p>							
<p>SANS 1200LB.8.2.2.3 <b>From commercial sources</b></p>							
24		Selected stone material with aggregate size 50 to 75mm nominal diameter, as infill to concrete gutter.	m <sup>3</sup>	28	R	-	
					<b>Total Carried forward</b>	<b>R</b>	-

<b>Total Brought forward</b>						<b>R</b>	<b>-</b>
<b>THE FOLLOWING IN CONCRETE LINED STORMWATER DRAINAGE CHANNEL AT THE EDGE OF TERRACE (refer to drawing no. 0.54/390 sheet 8)</b>							
	SANS 1200D	<b>EARTHWORKS</b>					
	SANS 1200D.8.3.3	<b>Restricted Excavation</b>					
25	SANS 1200D.8.3.3a	Excavate for stormwater drainage channel in all materials and dispose to a site provided by the Contractor.	m <sup>3</sup>	340		R	-
	SANS 1200D.8.3.2b	<b>Extra over for</b>					
26	SANS 1200D.8.3.2b.1	Intermediate excavation.	m <sup>3</sup>	69		R	-
	SANS 1200G	<b>CONCRETE STRUCTURAL</b>					
	SANS 1200G.8.2	<b>FORMWORK</b>					
	SANS 1200G.8.2.1	<b>Rough</b>					
27		Sides of stormwater drainage channel.	m <sup>2</sup>	941		R	-
	SANS 1200G.8.2.2	<b>Smooth</b>					
28		Sides of stormwater drainage channel.	m <sup>2</sup>	659		R	-
	SANS 1200G.8.2.3	<b>Special off-form</b>					
29		Form 25 x 25mm Chamfered edge along exposed top edge of concrete.	m	3764		R	-
	SANS 1200G.8.3	<b>REINFORCEMENT</b>					
	SANS 1200G.8.3.2	<b>High tensile welded mesh</b>					
30		Type reference 395 to walls and floor of stormwater drainage channel with 40mm cover.	m <sup>2</sup>	1337		R	-
	SANS 1200G.8.4	<b>CONCRETE</b>					
	SANS 1200G.8.4.3	<b>Strength concrete, 25MPa/19mm in</b>					
31		Walls and floor of stormwater drainage channel.	m <sup>3</sup>	201		R	-
	SANS 1200G.8.4.4	<b>Unformed surface finishes</b>					
32	SANS 1200G.8.4.4a	Wood - floated finish.	m <sup>2</sup>	678		R	-
	SANS 1200G.8.5	<b>Joints</b>					
33		20mm thick vertical 'expansion joint' through walls and floor of 150mm thick concrete stormwater drainage channel, including dowels, saw-cut, bond-breaker, silicone sealant, etc., complete, all as per drawing no. 0.54/390 sheet 40.	m	1882		R	-
		<b>SUNDRIES</b>					
34		Supply and install M.S galvanised grating 500mm wide with 50 X 4.5 bearer bars including 25 X 5 mm flat X 100mm long fishtail lugs welded to angle complete as per drawing 0.54/390 sheet 6)	m	941		R	-
<b>Total Carried forward</b>						<b>R</b>	<b>-</b>

<b>Total Brought forward</b>						<b>R</b>	<b>-</b>
<b>THE FOLLOWING IN CONCRETE HEADWALLS / OUTLETS (refer to drawing no. 0.54/390 sheet 13)</b>							
<b>EARTHWORKS</b>							
<b>SANS 1200D</b>							
<b>SANS 1200D.8.3.3</b>							
<b>Restricted Excavation</b>							
35	SANS 1200D.8.3.3a	Excavate for stormwater drainage channel in all materials and dispose to a site provided by the Contractor.	m³	1516		R	-
<b>SANS 1200D.8.3.2b</b>							
<b>Extra over for</b>							
36	SANS 1200D.8.3.2b.1	Intermediate excavation.	m³	758		R	-
<b>SANS 1200G</b>							
<b>CONCRETE STRUCTURAL</b>							
<b>SANS 1200G.8.2</b>							
<b>FORMWORK</b>							
<b>SANS 1200G.8.2.1</b>							
<b>Rough</b>							
37		Sides of stormwater drainage channel.	m²	433		R	-
<b>SANS 1200G.8.2.3</b>							
<b>Special off-form</b>							
38		Form 25 x 25mm Chamfered edge along exposed top edge of concrete.	m	2886		R	-
<b>SANS 1200G.8.3</b>							
<b>REINFORCEMENT</b>							
<b>SANS 1200G.8.3.2</b>							
<b>High tensile welded mesh</b>							
39		High tensile welded mesh reference 245 to apron slab and walls.	m²	2165		R	-
<b>SANS 1200G.8.4</b>							
<b>CONCRETE</b>							
<b>SANS 1200G.8.4.3</b>							
<b>Strength concrete, 25MPa/19mm in</b>							
40		Apron slab, walls, splitter blocks and thickening for footing, including all accessories.	m³	325		R	-
<b>SANS 1200G.8.4.4</b>							
<b>Unformed surface finishes</b>							
	SANS 1200G.8.4.4a	Wood - floated finish.	m²	2165		R	-
<b>SANS 1200G.8.5</b>							
<b>Joints</b>							
41		Construction joint' through concrete including dowels, saw-cut, bond-breaker, silicone sealant, etc.	m	722		R	-
<b>SUNDRIES</b>							
42		Stilling basin including all necessary items complete as per drawing.	No.	3		R	-
<b>PROVISIONAL SUMS</b>							
<b>BUDGETARY ALLOWANCES</b>							
43,1							
43.1.1		Provide a Provisional Sum amount of R 100 000,00 (One Hundred Thousand Rands) for drainage works (Used at the Project Manager's instruction).	Sum	1	R	100 000,00	R 100 000,00
<b>TOTAL Carried forward to SUMMARY</b>						<b>R</b>	<b>100 000,00</b>

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 2: CIVIL WORKS</b>				
		<b>BILL NO. 7</b>				
		<b>FIRE PROTECTION</b>				
		<b>THE FOLLOWING IN OIL HOLDING DAM</b>				
1		<b>REMOVAL OF EXISTING WORK</b>				
1,1		Pumping out existing water from the oil dam.	litre	10 000	R	-
1,2		Carefully remove the existing 2,4 m welded mesh outer security fence, including poles, overhangs, and all existing accessories and dispose to a registered dumping site.	m	60	R	-
1,3		Breaking up and removing the existing concrete slab/baffle wall, approximately 1000mm high x 200mm thick complete.	m	2	R	-
1,4		Remove existing shade cloth cover including all accessories and dispose to	m <sup>2</sup>	148	R	-
2		<b>REFURBISHMENT OF THE OIL DAM</b>				
2,1		Cut V-groove along all cracks.	Sum	1	R	-
2,2		Fill with Sika monotop 612 Cementitious fiber reinforcement repair mortar.	Sum	1	R	-
2,3		Smooth spatula or wood trowel finish	Sum	1	R	-
2,4		Clean all surfaces and remove all loose materials, surface laitence mechanical with brush wire	m <sup>2</sup>	112	R	-
2,5		Dampened the prepared surfaces thoroughly with clean water	m <sup>2</sup>	112	R	-
2,6		Apply two coats Sika top-seal 107 to all surfaces as per manufacturers' specifications.	m <sup>2</sup>	165	R	-
3	SANS 1200G	<b>CONCRETE (STRUCTURAL)</b>				
	SANS 1200G.8.2	<b>FORMWORK</b>				
	SANS 1200G.8.2.1	<b>Rough</b>				
3,1		Sides of compartment wall.	m <sup>2</sup>	53	R	-
	SANS 1200G.8.2.4	<b>Special off-form</b>				
3,2		Form rounded edge along top edge of concrete wall or step.	m	24	R	-
		<b>CONCRETE (STRUCTURAL)</b>				
		<b>Reinforcement</b>				
		<b>Steel bars</b>				
3,3		Mild-tensile steel bars All diameters.	t	0,080	R	-
3,4		High-tensile steel bars All diameters.	t	0,162	R	-
		<b>Concrete</b>				
	SANS 1200G.8.4.3	<b>Strength concrete, 25MPa/19mm in</b>				
3,5		Compartment wall.	m <sup>3</sup>	6	R	-
		<b>WATERPROOFING</b>				
		<b>Waterproof sealant</b>				
3,6		Pressure clean exposed concrete surfaces of oil holding dam, allow to dry and spray dam walls and floor with polyurethane lining (quail-urethane) all in strict accordance with the suppliers instructions.	m <sup>2</sup>	112	R	-

3,7	Apply Sika water sweber, Type WS2005 expandable pre-formed joint sealing waterstop to Manufacturers' specifications.	m	24	R	-
3,8	Apply Sikadur combiflex	m	24	R	-
	<b>Total Carried forward</b>			<b>R</b>	<b>-</b>

<b>Total Brought forward</b>						<b>R</b>	-
4	SANS 1200H	<b>STRUCTURAL STEELWORK</b>					
	SANS 1200H.8.3.1	<b>Supply and fabrication:</b>					
	SANS 1200H.8.3.1.2	<b>The following in hot-dipped galvanized Grade xx mild steel structures welded and/or bolted together:</b>					
		<b>The following in 2 no. trap doors and support structure.</b>					
4,1		50 x 50 x 5mm Angle section in trap door support structure.	t	0,031	R	-	
4,2		50 x 50 x 5mm Angle section framing to trap door.	t	0,019	R	-	
4,3		100 x 100 x 5mm Thick plate section with 14mm diameter hole in centre to take holding down bolt.	t	0,001	R	-	
4,4		50 x 165 x 5mm Thick plate section as bracing for vertical supports.	t	0,050	R	-	
4,5		25 x 25 x 5mm Angle section welded to trap door framing, to take wire mesh.	t	0,007	R	-	
4,6		100mm Butt hinges.	No	3	R	-	
4,7		25 x 25 x 2mm Diameter cross welded steel wire mesh clamped between flat bar and angle.	m <sup>2</sup>	148	R	-	
		<b>The following in 2 no. Steel stairs</b>					
4,8		Galvanised steel sections in stairs, including bolts, brackets, etc. complete as per drawing.	t	0,145	R	-	
4,9		Vastrap plate steps welded to side plates as per the drawing.	m <sup>2</sup>	5	R	-	
	SANS 1200H.8.3.2	<b>Delivery to site</b>					
4,10	SANS 1200H.8.3.2.1	Delivery of normal loads of steelwork to site.	t	0,300	R	-	
	SANS 1200H.8.3.3	<b>Erection on site</b>					
4,11		Offloading, stacking on site, and erection of steelwork in final position complete.	t	0,300	R	-	
5	SANS 1200L	<b>MEDIUM PRESSURE PIPELINES</b>					
	SANS 1200L.8.2.5	<b>Supply and place pipes, valves and specials</b>					
5,1		Supply, deliver and install water pressure relief valve as detailed on drawing, including testing, including all accessories , complete.	No.	1	R	-	
6	SANS 1200P	<b>ELECTRICAL INSTALLATION</b>					
6,1		Supply, deliver and install submersible pump, including electrical supply, 50mm diameter piping, fittings, testing, including all accessories , complete, as detailed on drawing.	No.	1	R	-	
7		<b>FENCING, including all accessories</b>					
		<b>Supply, deliver and install boundary fence, all as per Manufacturer's instruction and details on drawing.</b>					
7,1		2.4m High High security fence, including all intermediate and end posts, stays, bases, connections, bolts, including all accessories	m	60	R	-	
7,2		Extra over fencing for 1m wide pedestrian gate.	No	1	R	-	
8		<b>Supply, deliver and install suitable shadecloth as sand barrier around Oil Holding Dam</b>					
8,1		1,24m High shadecloth as sand barrier, suitably fixed to galvanized boundary fence.	m	60	R	-	
8,2		Extra over shadecloth for cutting and fixing to pedestrian gate.	No	1	R	-	
<b>TOTAL Carried forward to SUMMARY</b>						<b>R</b>	-

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<p><b>SECTION 2: CIVIL WORKS</b></p> <p><b>BILL NO. 8</b></p> <p><b>SUPPORT STEEL</b></p> <p><b>Notes to Tenderers</b></p> <p>The Tenderer is to allow in the pricing of structural steelwork for all steelwork to be erected and to include for ALL necessary steel packing pieces.</p> <p><b>STRUCTURAL STEELWORK</b></p> <p>Supply and Fabrication</p> <p>Supply and fabrication of steelwork</p> <p>Steelwork to be hot dipped galvanized Grade 300W, as per the standard specification, complete with all the necessary cleats, brackets, gussets, packs, shop fasteners baseplates and the like, including cleaning of steelwork, shop priming and loading ready for dispatch to site and preparation of shop detail drawings:</p>				
1		Structural steelwork.	t	49,186	R	-
		<b>Delivery to site</b>				
2		Delivery of normal loads of steelwork to site.	t	50,691	R	-
		<b>Offloading and erection of steel on site</b>				
3		Offloading, stacking on site, and erection of steelwork in final position complete.	t	50,691	R	-
		<b>Holding down bolts</b>				
4		Supply, deliver to site and install galvanized high strength friction U-shaped holding down bolt (Grade 8.8), including nut, hardened steel washer, load indicating washer, taper washer where needed and sheradised.	t	1,505	R	-
<b>TOTAL Carried forward to SUMMARY</b>						R -

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 2: CIVIL WORKS</b>				
		<b>BILL NO. 9</b>				
		<b>TRANSFORMER PLINTHS</b>				
		<b>TRANSFORMER 1 &amp; 3</b>				
1		<b>REMOVAL OF EXISTING WORK</b>				
1,1		Saw cutting, breaking up and removing existing 200mm thick concrete road, including cutting off and removing reinforcement bars, mesh, pipes, etc. complete	sum	1		R -
1,2		Carefully remove the existing double leaf access gates, including poles, gate overhangs and all existing accessories and dispose to a registered dumping site.	No	1		R -
2	SANS 1200D	<b>EARTHWORKS</b>				
	SANS 1200D.8.3.3	<b>Restricted Excavation</b>				
	SANS 1200D.8.3.3a	<b>Excavate for restricted foundations, in all materials and use for backfill or dispose to a site provided by the Contractor (includes over-excavation)</b>				
2,1		Reduced levels under floors.	m <sup>3</sup>	359		R -
2,2		Strip footings.	m <sup>3</sup>	45		R -
2,3		Cable trenches.	m <sup>3</sup>	8		R -
2,4		Sumps.	m <sup>3</sup>	9		R -
	SANS 1200D.8.3.2b	<b>Extra-over for:</b>				
2,5	SANS 1200D.8.3.2b.1	Intermediate excavation.	m <sup>3</sup>	209		R -
3	SANS 1200G	<b>CONCRETE (STRUCTURAL)</b>				
	SANS 1200G.8.2	<b>FORMWORK</b>				
	SANS 1200G.8.2.1	<b>Rough</b>				
3,1		Trench walls.	m <sup>2</sup>	41		R -
3,2		Sump walls.	m <sup>2</sup>	30		R -
	SANS 1200G.8.2.2	<b>Smooth formwork to</b>				
3,3		Plinths and platforms.	m <sup>2</sup>	66		R -
3,4		Trench walls.	m <sup>2</sup>	22		R -
3,5		Sump walls.	m <sup>2</sup>	28		R -
	SANS 1200G.8.2.4	<b>Special off-form:</b>				
3,6		Form 20 x 20mm chamfer along top edge of exposed stub column.	m	55		R -
	SANS 1200G.8.2.6	<b>Box out holes / form voids:</b>				
3,7	SANS 1200G.8.2.6a	Box out to form circular hole to suit 300mm diameter precast concrete pipe (elsewhere measured) in 200mm thick concrete wall.	No.	1		R -
		<b>Total Carried forward</b>				<b>R -</b>

<b>Total Brought forward</b>						<b>R</b>	-
	SANS 1200G.8.3	<b>REINFORCEMENT</b>					
	SANS 1200G.8.3.2	<b>High tensile welded mesh:</b>					
3,8		High tensile welded mesh reference 395 to top and bottom of plinths and platforms	m <sup>2</sup>	684	R	-	
		<b>CONCRETE</b>					
	SANS 1200G.8.4.2	<b>Blinding layer in 15MPa/ 19mm concrete</b>					
3,9		50mm thick blinding	m <sup>3</sup>	22	R	-	
	SANS 1200G.8.4.3	<b>Strength concrete, 25MPa/19mm in:</b>					
3,10		Surface beds.	m <sup>3</sup>	24	R	-	
3,11		Bottom and sides of trenches and sumps.	m <sup>3</sup>	14	R	-	
3,12		Transformer plinth.	m <sup>3</sup>	50	R	-	
3,14		Strip Footings	m <sup>3</sup>	7	R	-	
3,15		Off-loading platform.	m <sup>3</sup>	128	R	-	
		<b>TEST BLOCKS</b>					
3,16		Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional).	No	40	R	-	
	SANS 1200G.8.4.4	<b>Unformed surface finishes</b>					
3,17	SANS 1200G.8.4.4a	Wood floated finish on top concrete surfaces , including working in confined areas.	m <sup>2</sup>	435	R	-	
	SANS 1200G.8.5	<b>Joints</b>					
3,18		20mm Expansion joint' through 600mm thick concrete including dowels, saw-cut, bond-breaker, silicone sealant, etc.	m	102	R	-	
3,19		20mm Expansion joint' through 900mm thick concrete including dowels, saw-cut, bond-breaker, silicone sealant, etc.	m	54	R	-	
3,20		20mm Thick 'Flexcell' or equal approved joint filler not exceeding 300mm high, including raking out to a depth of 16mm and fill with 10mm thick layer 'Pressfit' neoprene seal, including bond breaker, etc.	m	156	R	-	
4		<b>SUNDRIES</b>					
4,1		TDB foundation complete as per detail on drawing 0.54/3568 rev 6, complete including all excavations, backfilling, concrete, holding down bolts, etc.	No.	1	R	-	
		<b>Screeds</b>					
4,2		Cement mortar 1:3 screed average 45mm 'thick, to falls.	m <sup>2</sup>	435	R	-	
		<b>Sand fill</b>					
4,3		To trenches, including levelling and lightly 'compacting.	m <sup>3</sup>	13	R	-	
	SANS 1200H.8.3.9	<b>Flooring, complete and installed with frames</b>					
		<b>Gratings installed with as detailed on Drawing 0.54/390 sheet 70</b>					
4,4		Trench Covers 325mm wide from galvanized Angle Iron frame size 30x30x5mm with clip item 29 (3 per angle) with VITEX mesh 20-3JR (25x50x6x4,5) bolted to frame with and including 6mm stainless steel hook bolts, complete as per detail on drawing 0.54/390 sheet 70.	No.	77	R	-	
		<b>Gratings installed as detailed on Drawing 0.54/390 sheet 69</b>					
4,5		Sump Cover 700x700mm from galvanized Angle Iron frame size 30x30x5mm with clip item 29 with VITEX mesh 20-3JR (25x50x6x4,5) bolted to frame with and including 6mm stainless steel hook bolts, complete as per detail on drawing 0.54/390 sheet 69.	No.	3	R	-	
		<b>Total Carried forward</b>			<b>R</b>	<b>-</b>	

				<b>Total Brought forward</b>		<b>R</b>	-
5		<b>MASONRY</b>					
		<b>Brickwork in foundations</b>					
		<b>Brickwork in clay bricks in Class II cement mortar in stretcher bond, including all fair and rough cutting:</b>					
5,1		One brick wall in bund wall.	m <sup>2</sup>	33	R	-	
		<b>Brickwork in superstructure</b>					
		<b>Brickwork in clay bricks in Class II mortar</b>					
5,2		One brick (230mm) wall in bund wall, including building in section after Transformer installed.	m <sup>2</sup>	4	R	-	
		<b>Face brickwork</b>					
5,3		Extra over brickwork for facing with approved facing brick and pointing in flush horizontal and vertical joints.	m <sup>2</sup>	62	R	-	
		<b>Face-brick on edge header course copings, sills, etc. of approved face-bricks, pointed with flush joints on all exposed faces</b>					
5,4		Brick-on-edge header course copings, pointed with solid concave joints on all exposed faces, to top of one brick wall, including building in section after Transformer is installed.	m	73	R	-	
		<b>Brickwork reinforcement:</b>					
5,5		150mm Wide brickforce reinforcing fabric lapped at angles and junctions and built into brickwork.	m	807	R	-	
		<b>SUNDRIES</b>					
5,6		Straight joint through bund wall.	m	73	R	-	
5,7		Leave or form hole through 230mm brick bund wall for 300mm concrete pipe.	No.	2	R	-	
5,8		Leave or form hole through 230mm brick bund wall for cable trench as per detail drawing 0.54/390 sheet 49B.	No.	2	R	-	
	SANS 1200LC	<b>CABLE DUCTS</b>					
5,9	SANS 1200LC.8.2.2a	Excavate in all materials for trenches, backfill, compact and dispose for surplus material for set of 2 no. x 160mm pipes diameter uPVC pipes, not exceeding 1m deep.	m <sup>3</sup>	6	R	-	
	SANS 1200LC.8.2.5	<b>Supply, lay, joint, bed and prove duct with nominal 2mm diameter draw wires, including blocking off ends:</b>					
5,10		Set of 2 no. x 160mm diameter Class 16 uPVC pipes laid according to Engineer's requirements.	m	24	R	-	
		<b>Total Carried forward</b>			<b>R</b>	<b>-</b>	



				<b>Total Brought forward</b>		<b>R</b>	-
7	SANS 1200HB	<b>CLADDING AND SHEETING</b>					
	SANS 1200HB.8.2.2	<b>Supply and install cladding and sheeting</b>					
7,1		Supply, deliver and install 6m high stainless steel fire wall, including hot-dipped galvanized mild steel support posts, IBR profile sheeting, fixing brackets, purlins, cleats, bolts, etc., complete, including offsets or changes in direction along length (In no. 4 'Module A' type panels, measured along straight length) refer drawing 0.54/4161.	m <sup>2</sup>	173		R	-
7,2		Supply, deliver and install 'Module B' type stainless steel fire wall at unprotected end of wall, comprising IBR profile sheeting, suitably fixed to stainless steel post refer drawing 0.54/4161.	m <sup>2</sup>	10		R	-
7,3		Supply, deliver and install 6m high stainless steel fire wall, including hot-dipped galvanized mild steel support posts, IBR profile sheeting, fixing brackets, purlins, cleats, bolts, etc., complete, including offsets or changes in direction along length (In no. 3 'Module C' type panels, measured along straight length) refer drawing 0.54/5865.	m <sup>2</sup>	195		R	-
7,4		Supply, deliver and install 'Module B' type stainless steel fire wall at unprotected end of wall, comprising IBR profile sheeting, suitably fixed to stainless steel post refer drawing 0.54/5865.	m <sup>2</sup>	15		R	-
				<b>Total Carried forward</b>		<b>R</b>	-

<b>Total Brought forward</b>						<b>R</b>	<b>-</b>
8		<b>THE FOLLOWING IN FIRE EQUIPMENT KIOSKS</b>					
	SANS 1200D	<b>EARTHWORKS</b>					
	SANS 1200D.8.3.3	<b>Restricted excavation</b>					
8,1	SANS 1200D.8.3.3a	Excavate for restricted foundations in all materials and use for backfill or dispose to a site provided by the Contractor (includes over-excavation) .	m³	2	R	-	
	SANS 1200D.8.3.2b	<b>Extra-over for</b>					
8,2	SANS 1200D.8.3.2b.1	Intermediate excavation.	m³	1	R	-	
	SANS 1200G	<b>CONCRETE (STRUCTURAL)</b>					
	SANS 1200G.8.2	<b>FORMWORK</b>					
	SANS 1200G.8.2.1	<b>Rough</b>					
8,3		Sides of bases, stub columns	m²	2	R	-	
	SANS 1200G.8.4	<b>CONCRETE</b>					
	SANS 1200G.8.4.2	<b>Blinding layer in 15MPa/ 19mm concrete</b>					
8,4		15MPa/ 19mm concrete in blinding.	m³	1	R	-	
	SANS 1200G.8.4.3	<b>Strength concrete, 25MPa/19mm in</b>					
8,5		Bases, stub columns.	m³	1	R	-	
	SANS 1200G.8.4.4	<b>Unformed surface finishes</b>					
8,6	SANS 1200G.8.4.4a	Wood floated finish on top concrete surfaces, including working in confined areas.	m²	3	R	-	
	SANS 1200G.8.4.3	<b>Lightweight concrete</b>					
		<b>Celbeton lightweight concrete</b>					
		<b>50mm (Average) thick grading to top of precast concrete lintels.</b>					
8,7	SANS 1200G.8.2.3	Finishing top surfaces of grading smooth to falls, to receive waterproofing.	m²	4	R	-	
	SANS 1200G.8.5	<b>Joints</b>					
8,8		20mm Thick 'Flexcell' or equal approved joint filler not exceeding 300mm high, including raking out to a depth of 16mm and fill with 10mm thick layer 'Pressfit' neoprene seal, including bond breaker, etc. complete.	m	7	R	-	
		<b>MASONRY</b>					
		<b>Brickwork in superstructure</b>					
		<b>Brickwork in FBX bricks in Class II mortar</b>					
8,9		One brick (230mm) wall.	m²	10	R	-	
		<b>Brickwork reinforcement</b>					
8,10		150mm Wide reinforcement built in horizontally.	m	114	R	-	
		<b>Face brickwork</b>					
8,11		Extra over brickwork for face brickwork, pointed with solid concave joints to all horizontal and vertical joints.	m²	20	R	-	
8,12		Face brick lining 110mm wide to top of 230mm brick wall, pointed with solid concave joints on all exposed faces.	m	6	R	-	
		<b>Prestressed fabricated lintels</b>					
8,13		100 x 70mm Lintels laid side by side, in lengths not exceeding 3m.	m²	4	R	-	
		<b>WATERPROOFING</b>					

8,14		<b>Sika Sealoflex flexible reinforced waterproofing membrane, with Sika-Cemflex waterproofing slurry</b> On roof screeds, to slight falls, including downturns, etc.	m <sup>2</sup>	4		R -
8,15		<b>Joint sealants</b> Polysulphide sealing compound including backing cord, bond breaker, primer, etc.	m	7		R -
8,16		<b>SANITARY FITTINGS, TANKS, GEYSERS, ETC.</b> <b>Fire fighting equipment:</b> 50kg Dry chemical fire extinguisher, mounted on and including wheeled 'carry cart'.	No.	2		R -
<b>TOTAL Carried forward to SUMMARY</b>						<b>R -</b>

## LESEDING 400/132kV 500MVA TRANSFORMER 3 CIVIL WORKS

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 2: CIVIL WORKS</b> <b>BILL NO. 10</b> <b>CABLE TRENCHES, DUCTS, JUNCTIONS AND RAMPS</b>  <b>ELECTRICAL INSTALLATION</b> <b>THE FOLLOWING IN CABLE TRENCHES, DUCTS &amp; JUNCTIONS</b>  Construct complete unit as specified and shown on Drawing no. 0.54/390, including excavation in all material, working space, risk of collapse, regular dewatering, concrete, formwork, reinforcement, imported backfill and disposal. Cable trenches and junctions complete with concrete covers. Note: Covers must be fitted, marked for positions and placed next to trenches for later installation by others.				
1		Single trench (0.54/390 sheet 15).	m	120		R -
		<b>Concrete cable trench junctions, including supporting galvanized steelwork:</b>				
2		Single to double junction.	No.	1		R -
3		Single to single junction.	No.	2		R -
4		Entrance to junction box.	No.	4		R -
5		Supply of single trench concrete covers.	No.	4900		R -
<b>TOTAL Carried forward to SUMMARY</b>						<b>R -</b>

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 2: CIVIL WORKS</b>				
		<b>BILL NO. 11</b>				
		<b>YARDWORKS</b>				
		<b>EARTHWORKS</b>				
1		Supply and spread 26,5mm nominal diameter yardstones from commercial sources, in 100mm thick layer and lightly compact to set levels.	m <sup>3</sup>	997	R	-
2		Remove the existing 26.5 mm nominal diameter yard stones and stockpile.	m <sup>2</sup>	2057	R	-
3		Reinstate yardstone from stockpile.	m <sup>2</sup>	2057	R	-
4		Supply and spread 26,5mm nominal diameter yardstones from commercial sources, in 100mm thick layer and lightly compact to set levels (Provisional)	m <sup>3</sup>	206	R	-
		<b>ELECTRICAL</b>				
		<b>EARTH MAT</b>				
		<b>Supply, deliver and lay copper earth mat, equipment earthing, earth straps, including excavation in all material, risk of collapse, bedding, backfill, compaction and testing at depths up to (See Earth Mat Specifications). All flat copper to be 50 x 3mm in accordance with BS 1432, pickled and annealed (1.35kg/m) and 10mm diameter copper in accordance with BS 1433 annealed black copper (0.701kg/m):</b>				
5		1 x 10mm diameter copper horizontal under ground.	m	1148	R	-
6		2 x 10mm diameter copper horizontal and vertical under ground.	m	200	R	-
7		Crimp joints 10mm round to round (refer Sheets C5).	No	148	R	-
8		50 x 3mm flat copper.	m	462	R	-
9		Terminate round copper tail to equipment (refer Sheets C6 and C7).	No	428	R	-
10		50 x 50 x 12mm Clamp connection with 17mm diameter hole through centre, to take M16 bolt and 2 no. x 10mm diameter rods.	No	214	R	-
11		Bolted earthtail connections, 2 x 10mm diameter rods to 50 x 3mm flat.	No	214	R	-
12		Excavate, search for and locate 1 x 10mm copper, including excavation in all material, risk of collapse, backfill and compact.	No	25	R	-
13		Earth resistivity test (on PM's instruction).	Item	1	R	-
		<b>Weedkillers, insecticides, etc.</b>				
14		Supply and apply approved weedkiller to terrace, in strict accordance with the Manufacturer's instructions (Provisional)	m <sup>2</sup>	1200	R	-
<b>TOTAL Carried forward to SUMMARY</b>						R -

## LESEDING 400/132kV 500MVA TRANSFORMER 3 CIVIL WORKS

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 2: CIVIL WORKS</b>				
		<b>BILL NO. 12</b>				
		<b>LIGHT MASTS AND FOUNDATIONS</b>				
1	SANS 1200D	<b>EARTHWORKS</b>				
	SANS 1200D.8.3.3	<b>Restricted excavation:</b>				
1,1	SANS 1200D.8.3.3a	Excavate for bases and trenches in all materials and use for backfill or embankment or dispose to a site provided by the Contractor (includes over-excavation).	m <sup>3</sup>	231	R	-
	SANS 1200D.8.3.2b	<b>Extra-over for:</b>				
1,2	SANS 1200D.8.3.2b.1	Intermediate excavation.	m <sup>3</sup>	231	R	-
2	SANS 1200G	<b>CONCRETE (STRUCTURAL)</b>				
	SANS 1200G.8.2	<b>FORMWORK</b>				
	SANS 1200G.8.2.1	<b>Rough</b>				
2,1		Sides of bases, stub columns.	m <sup>2</sup>	15	R	-
	SANS 1200G.8.2.2	<b>Smooth</b>				
2,2		Sides of bases, stub columns.	m <sup>2</sup>	7	R	-
	SANS 1200G.8.2.4	<b>Special off-form</b>				
2,3		Form 20 x 20mm chamfer along top edge of exposed stub column.	m	15	R	-
	SANS 1200G.8.3	<b>REINFORCEMENT</b>				
	SANS 1200G.8.3.1	<b>Steel bars</b>				
2,4		Mild-tensile steel bars.	t	0,021	R	-
	SANS 1200G.8.3.1	<b>Steel bars</b>				
2,5		High-tensile steel bars.	t	0,943	R	-
	SANS 1200G.8.4	<b>CONCRETE</b>				
	SANS 1200G.8.4.2	<b>Blinding layer in 15MPa/ 19mm concrete</b>				
2,7		50mm thick blinding	m <sup>3</sup>	7	R	-
	SANS 1200G.8.4.3	<b>Strength concrete, 25MPa/19mm in</b>				
2,8		Bases and foundations.	m <sup>3</sup>	18	R	-
	SANS 1200G.8.4.4	<b>Unformed surface finishes:</b>				
2,9	SANS 1200G.8.4.4a	Wood floated finish on top surface of bases and stub, including working in confined areas.	m <sup>2</sup>	34	R	-
	SANS 1200G.8.8	<b>HOLDING DOWN BOLTS AND MISCELLANEOUS METAL WORK</b>				
2,10		Provide and install Grade 8.8 M36 x 640mm long galvanized mild steel bolt, threaded at exposed end and fitted with suitable nut and washer, including anchor plate welded on at other end, bolt cast into concrete plinth, stub column or base, in exact position.	t	0,173	R	-
	SANS 1200LC.8.2.5	<b>Supply, lay, bed and prove duct:</b>				
		<b>Cable sleeves:</b>				
2,11		110mm Diameter x 700mm long uPVC sleeve cast in exact position in concrete stub column.	m	6	R	-







	<b>JUNCTION BOXES:</b>					
4,7	Weatherproof IP68 'Pratley' type junction box complete, including terminal blocks, busbars, fittings, internal wiring, labels, etc. as described, installed with and including mounting brackets to steel masts all in accordance with drawing xxxx.	No.	2		R	-
	<b>SUPPLY, DELIVER AND INSTALL THE FOLLOWING LOW VOLTAGE CABLES</b>					
	<b>600/1000V grade PVC/PVC/SWA/PVC stranded copper conductor cable laid in ground:</b>					
4,8	BVV3ECV	m	600		R	-
4,9	BVX4ECV	m	400		R	-
4,10	BVX4HCV	m	410		R	-
	<b>Termination complete for 600/1000V grade PVC/PVC/SWA/PVC stranded copper conductor cable, including glands (glands to be supplied by Contractor):</b>					
4,10	BVV3ECV	No.	30		R	-
4,12	BVX4ECV	No.	8		R	-
4,13	BVX4HCV	No.	10		R	-
	<b>CABLE MARKERS AND TAGS:</b>					
4,14	Cable number tags as per the drawing.	No.	24		R	-
4,15	Cable route marker as per the drawing.	No.	24		R	-
	<b>CABLE BOXES</b>					
	<b>Aluminium alloy / GRP termination box complete with lockable cover (terminations elsewhere measured):</b>					
4,16	No. 2 box.	No.	2		R	-
	<b>CABLE PIPES:</b>					
4,17	110mm Diameter PVC cable piping as sleeve fixed to inside of steel masts.	m	50		R	-
	<b>LUMINAIRES AND EQUIPMENT</b>					
	<u>GENLUX LIGHTING - KRATOS 41807</u>					
4,18	244W LED Luminaire, 4000K, 150LM/W floodlighting complete with lamps, connections, etc. mounted in position with and including mounting brackets all in accordance with drawing xxxx.	No.	25		R	-
	<b>SUNDRIES</b>					
	<b>Testing and commissioning:</b>					
4,19	Allow for general attendance to supply authority for inspection, testing, balancing and commissioning the complete electrical installation.	Sum	1		R	-
	<b>Earthworks</b>					
4,20	Excavation in all materials for cable trench, sleeve pipe, etc., including risk of collapse, keeping excavations free from water, river sand bed, backfilling, compacting and disposal of surplus material, all to the Engineer's specification.	m <sup>3</sup>	20		R	-
<b>TOTAL Carried forward to SUMMARY</b>					<b>R</b>	<b>-</b>

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 2: CIVIL WORKS</b>				
		<b>BILL NO. 13</b>				
		<b>SAFETY FENCING, SECURITY FENCING, NON LETHAL FENCING INCLUDING SECURITY LIGHTING</b>				
1		<b>REMOVAL OF EXISTING WORK</b>				
		<u>Gates</u>				
1.1		Carefully remove the existing double leaf access gates, including poles, gate overhangs and all existing accessories and dispose to a registered dumping site.	No	2		R -
		<u>132kV Yard fence</u>				
1.2		Carefully remove the existing safety security fence, including poles, overhangs, cutting and the removal of all existing piggy-backed non-lethal equipment, accessories and dispose to a registered dumping site.	m	144		R -
2	SANS 1200C	<b>SITE CLEARANCE</b>				
	SANS 1200C.8.2.1	<b>Clear and grub</b>				
2.1.		Clearing the surface, grubbing of trees and stumps, cutting trunks, branches, demolishing, etc. Including removing, transporting and disposing.	m²	22 690		R -
		<b>WEEDKILLERS, INSECTICIDES, etc.</b>				
2.2		Supply and apply approved weedkiller to terrace, in strict accordance with the Manufacturer's instructions.	m²	22 690		R -
2.3		Supply and spread 26,5mm nominal diameter yardstones from commercial sources, in 100mm thick layer and lightly compact to set levels.	m³	2 269		R -
3		<b>TEMPORARY FENCING (PROVISIONAL)</b>				
		<b>Supply, deliver and install new 1,83m high galvanized diamond mesh 'safety fence' as temporary fencing, complete (as detailed on Drawings 0.54/4963 Sheets 1 to 4 inclusive)</b>				
3.1		1,83m High galvanized wire fence, comprising of 64mm x 64mm x 2,5mm diameter diamond mesh supported on and including 3 no. x 4mm diameter horizontal straining wires, mesh strained with 10mm diameter galvanized hook bolts, straining wires strained with 100mm long x 10mm diameter straining bolts, including all necessary hot dipped galvanized steel angle section, corner, intermediate, gate posts and stays, base plates, etc., casting posts in and including 20MPa/19mm concrete bases, including excavation, backfilling and disposing of surplus excavated material, concrete, formwork, etc., (no overhang required).	m	805		R -
3.2		Extra over 1,83m high fencing for 6m wide double-leaf Vehicular access gate type 'B' including 40mm diameter hot dipped galvanized steel tube framing and cross bracing, diamond mesh covering bound on with 2,5mm diameter galvanized wire, 460mm long x 8mm diameter chain link welded on (padlock to be provided by Eskom), 3 no. hinges per leaf, 280mm long tower bolt and 100mm long x 20mm diameter steel slot cast flush in top surface of concrete, etc., complete.	No.	2		R -
3.2		Extra over 1,83m high fencing for 995mm wide single-leaf Pedestrian gate type 'A' including 40mm diameter hot dipped galvanized steel tube framing, diamond mesh covering bound on with 2,5mm diameter galvanized wire, locking mechanism (padlock to be provided by Eskom), 3 no. hinges, etc.. complete.	No.	2		R -
4		<b>SAFETY FENCE</b>				
		<b>Supply, deliver and install new 1,83m high galvanized diamond mesh 'safety fence' complete (as detailed on Drawings 0.54 / 4963 Sheets 1 to 4 inclusive)</b>				
		<b>132kV YARD EXTENSION AND TRANSFORMER 3</b>				

4,1	1,83m High galvanised wire fence, comprising 64mm x 64mm x 2,5mm diameter diamond mesh supported on and including 3 no. x 4mm diameter horizontal straining wires, mesh strained with 10mm diameter galvanized hook bolts, straining wires strained with 100mm long x 10mm diameter straining bolts, including all necessary hot dipped galvanised steel angle section, corner, intermediate, gate posts and stays, base plates, etc., casting posts in and including 20MPa/19mm concrete bases (refer detail on drawings), including excavation, backfilling and disposing of surplus excavated material, concrete, formwork, etc., all as per required layout.	m	208	R	-
4,2	Extra over 1,83m high fencing for 90 degree bend.	No	2	R	-
4,3	Extra over 1,83m high fencing for end.	No.	2	R	-
4,4	Extra over 1,83m high fencing for intersection with existing fencing.	No.	2	R	-
4,5	Extra over 1,83m high fencing for 995m wide single-leaf Pedestrian gate type 'A' including 40mm diameter hot dipped galvanized steel tube framing, diamond mesh covering bound on with 2,5mm diameter galvanized wire, locking mechanism (padlock to be provided by Eskom), 3 no. hinges, etc.	No.	2	R	-
4,6	Extra over 1,83m high fencing for 6m wide double-leaf Vehicular access gate type 'B' including 40mm diameter hot dipped galvanized steel tube framing and cross bracing, diamond mesh covering bound on with 2,5mm diameter galvanized wire, 460mm long x 8mm diameter chain link welded on (padlock to be provided by Eskom), 3 no. hinges per leaf, 280mm long tower bolt and 100mm long x 20mm diameter steel slot cast flush in top surface of concrete (elsewhere measured), etc., complete.	No.	3	R	-
<b>Total Carried forward</b>				<b>R</b>	<b>-</b>

					<b>Total Brought forward</b>	<b>R</b>	<b>-</b>
5		<b>SECURITY FENCE</b>					
		<b>Supply, deliver and install new 2,4m high weldmesh barrier 'security fence' complete (all as detailed on Drawings 0.54 / 5633 Sheets 1 to 7 inclusive):</b>					
		<b>NEW STORAGE AREA</b>					
5,1		2.4m High galvanised weldmesh fence with two 730mm long angle sections as 'V' shaped overhang both set to 45 degrees, comprising 50mm x 50mm x 3,1mm diameter high tensile steel weldmesh covering fixed to and including 5 no. x 4mm diameter horizontal straining wires, mesh strained with 10mm galvanized hook bolts, straining wires strained with 100mm long x 10mm diameter straining bolts, including all necessary hot dipped galvanized steel angle section posts, corner posts, stays, top and bottom rails, including all cover plates, base plates, casting posts into and including concrete bases, including excavations, backfilling, carting away excess excavated material, 4 no. straining wires to each overhang, etc., complete (inner fence).	m	246	R	-	
5,2		Extra over 2,4m high barrier security fencing with overhang, for 90 degree bend	No.	4	R	-	
5,3		Extra over 2,4m high barrier security fencing for the supply and installation of 6,89m wide double-leaf Main Vehicular access gate (all in accordance with drawing 0.54/5633, Sheet 1 of 7)	No.	2	R	-	
6		<b>OUTER FENCE</b>					
		<b>Supply, deliver and install new 2,4m high tensile steel welded mesh fence complete (all as detailed on Drawing 0.54/8725)</b>					
6,1		2.4m High fence constructed from high tensile steel weld mesh of 80% with two 730mm long angle sections with V shaped overhang both set to 45 degrees, comprising 50mm x 50mm x 3,1mm diameter high tensile steel weldmesh covering fixed to and including 5 no. x 4mm diameter horizontal straining wires, mesh strained with 10mm galvanized hook bolts, straining wires strained with 100mm long x 10mm diameter straining bolts, including all necessary steel angle section posts, corner posts, stays, top and bottom rails, including all cover plates, base plates, casting posts into and including concrete bases, including excavations, backfilling, carting away excess excavated material, 4 no. straining wires to each overhang, etc., complete.	m	1372	R	-	
6,2		Extra over 2,4m high barrier security fencing with overhang, for 90 degree bend	No.	8	R	-	
6,3		Extra over 2,4m high security fencing for the supply and installation of a 1m security gate complete (all in accordance with drawing 0.54/10230, Sheet 1 to 6).	No	2	R	-	
6,4		Extra over 2,4m high security fencing for the supply and installation of a single 8.6m sliding gate with no middle post complete with gate motors (all in accordance with drawing 0.54/10230, Sheet 1 to 6).	No	1	R	-	
		<b>ANTI-TUNNELING</b>					
6,5		15MPa concrete anti-tunnelling vertical panels size 100mm wide x 600mm deep cast in ground to underside fence, including excavations (to allow for excavations in all materials), backfilling, compacting, formwork, expansion joints, mesh ref 395 reinforcement, etc. complete.	m	1372	R	-	
7		<b>NON-LETHAL FENCE</b>					
		<b>Supply, deliver and install new Non-Lethal security fence and Gates, including all excavations, mass concrete, backfilling, compacting, earthing, etc., complete (all in accordance with drawings).</b>					
7,1		Supply, deliver and install new Non-Lethal security fence complete with all strain posts, struts, inline strain post and struts, intermediate posts, signs, all necessary accessories, complete, including casting posts into concrete bases, excavations, backfilling, carting away excess excavated material, complete.	m	1396	R	-	
7,2		15MPa concrete anti-tunnelling vertical panels size 100mm wide x 600mm deep cast in ground to underside fence, including excavations (to allow for excavations in all materials), backfilling, compacting, formwork, expansion joints, mesh ref 395 reinforcement, etc. complete.	m	1396	R	-	
7,3		25MPa vegetation control concrete slab 800mm wide x 100mm thick to underside fencing, including preparation of ground, floating top surface of concrete, formwork, expansion joints, mesh ref 245 reinforcement, etc., complete.	m	1396	R	-	
7,4		6mm stranded copper under concrete slab.	m	1396	R	-	
7,5		Extra over 3m high Non lethal fencing for the supply and installation of a 1m security gate complete (all in accordance with drawing 0.54/10230, Sheet 1 to 6).	No	2	R	-	
7,6		Extra over 3m high Non lethal fencing for the supply and installation of a 8.6m Non-lethal sliding gate with no middle post complete with gate motors (all in accordance with drawing 0.54/10230, Sheet 1 to 6).	No	1	R	-	
8		<b>Testing and commissioning</b>					

8,1	Allow for testing and commissioning of the complete non-lethal fencing.	Sum	1	R -
	<b>Total Carried forward</b>			<b>R -</b>

				R	-
		<b>Total Brought forward</b>			
		<b>THE FOLLOWING IN SECURITY LIGHTING ALONGSIDE 2.4M HIGH 'SAFETY FENCING':</b>			
		<b>MEASUREMENT AND PAYMENT NOTES</b>			
		The Electrical installation for the 'Security Lighting' shall be in strict accordance with Eskom Drawings The Tenderer is to allow for ALL items necessary for the COMPLETE Electrical installation, in their pricing.			
		<b>Distribution Boards:</b>			
		The rates for miniature substations, HV switchgear, kiosks and distribution boards shall be deemed to include for all SABS and Eskom labels, etc.			
		<b>Cables:</b>			
		Cable lengths are measured from gland to gland The price for cable shall be deemed to include for all fixings, clamps and ties, unless otherwise indicated. The price for cables measured in sleeve pipes or cable entry pipes shall be deemed to include for the feeding of the entire length of cable through the sleeve pipe or cable entry pipe			
		The rates for cable terminations shall be deemed to include for luqs, tapes, core			
		<b>Outlet and draw boxes:</b>			
		No distinction shall be made for the number of entries in conduit boxes, draw boxes and draw trays			
		<b>Conductors:</b>			
		No allowance has been made for additional length of conductors at connecting points The price for conductors shall be deemed to include for any additional length as required.			
		<b>General:</b>			
		All work shall be measured nett as fixed in position, no allowance made for waste.			
		The description "... surface mounted to brickwork, etc." shall be deemed to include for all surface mounting, including fixing to concrete, steel, wood or any other surface.			
		The rates for conduit outlet and draw boxes, wireways, distribution boards, trays, etc., shall be deemed to include for chasing, cutting and penetration of walls, floors, etc., as required.			
		Rates for all items shall include for the supply, installation and connection thereof complete, except where otherwise described.			
		During the remeasurement of conductors and wireways on site, only the most practical economical route, within reason, shall be accepted for payment.			
9		<b>LUMINAIRE POLES</b>			
		Supply, deliver and install luminaire pole, provided with access opening, cable entry, gland plate, 5A SP 2.5kA circuit breaker, base plate welded to pole and embedded in ground, including single side entry spigot and pole to be painted colour as per the specification.			
		<b>"GENLUX"</b>			
9,1		5m Galvanised steel pole, embedded 1m deep in ground, provided with access opening cable entry and gland plate with 5A MCB, including excavations, backfilling and compacting of in-situ material.	No.	143	R -
10		<b>LUMINAIRES AND EQUIPMENT</b>			
		Security luminaires complete with lamps, connections, etc. mounted in exact position, with and including mounting brackets:			
		<b>"GENLUX LUXMO 41803"</b>			
10,1		60W HPS high pressure luminaire, including spigot at side entry.	No.	143	R -
11		<b>LOW VOLTAGE DISTRIBUTION BOARDS</b>			
		The following in new 500 x 700mm surface mounted security lighting distribution board FLDB, complete with door/s, sub-frames, fixtures, internal wiring, signage, connected and installed:			
11,1		430 / 230 AC Main LV Distribution board	No.	2	R -
11,2		5A SP 5kA circuit breaker.	No.	6	R -
11,3		5A TP switch disconnecter.	No.	6	R -

11,4	5A TP Contactor.	No.	6	R	-
11,5	10A TP 5kA circuit breaker.	No.	4	R	-
11,6	10A TP switch disconnecter.	No.	4	R	-
11,7	60A TP 10kA circuit breaker.	No.	2	R	-
11,8	63A TP switch disconnecter.	No.	2	R	-
<b>Total Carried forward</b>				<b>R</b>	<b>-</b>

					<b>Total Brought forward</b>	
					<b>R</b>	<b>-</b>
		<b>The following in weatherproof sub- distribution board box, complete with hinged door and padlockable lever lock, hot-dipped galvanized sheet metal, frames, sub-frames, fixtures, fittings, busbars, internal wiring, spare space for future devices, labels, etc. connected and installed complete:</b>				
11,11		Supply, deliver and install surface mounted weatherproof box on and including 1m high steel pole, suitably anchored in ground, including excavations, backfilling and compacting of in-situ material (Provisional).	No.	4	R	-
11,12		10A TP Contactor.	No.	4	R	-
11,13		5A SP 2.5kA circuit breaker.	No.	16	R	-
11,14		16A SP Switch disconnecter / Control switch (Provisional).	No.	1	R	-
11,15		Day / Night switch mounted in exact position on outside surface of Control Building, as determined by Eskom Project Manager.	No.	1	R	-
12		<b>SUPPLY, DELIVER AND INSTALL THE FOLLOWING LOW VOLTAGE CABLES</b>				
		<b>600/1000V grade PVC/PVC/SWA/PVC stranded copper conductor cable laid in ground (earthworks elsewhere measured):</b>				
12,1		BVX4DCV	m	920	R	-
12,2		BVX4GCV	m	2760	R	-
12,3		BVX4KCV	m	575	R	-
12,4		BVV3CCV	m	2185	R	-
		<b>Termination complete for 600/1000V grade PVC/PVC/SWA/PVC stranded copper conductor cable, including glands (glands to be supplied by Contractor):</b>				
12,5		BVX4DCV	No.	4	R	-
12,6		BVX4GCV	No.	278	R	-
12,7		BVX4KCV	No.	4	R	-
12,8		BVV3CCV	No.	278	R	-
		<b>CABLE MARKERS AND TAGS</b>				
12,9		Cable number tags as per drawing	No.	143	R	-
12,10		Cable route marker as per drawing	No.	286	R	-
		<b>CABLE PIPES</b>				
12,12		110mm Diameter PVC cable piping as sleeve.	m	2760	R	-
12,13		Excavation in all materials for cable trench, sleeve pipe, etc., including risk of collapse, keeping excavations free from water, river sand bed, backfilling, compacting and disposal of surplus material, all to the Engineer's specification.	m <sup>3</sup>	414	R	-
		<b>SUNDRIES</b>				
13		<b>Testing and commissioning</b>				
13,1		Allow for general attendance to supply authority for inspection, testing, balancing and commissioning the complete electrical installation.	Item	1	R	-
		<b>THE FOLLOWING IN FENCING AND SECURITY LIGHTING</b>				
14		<b>EARTH MAT</b>				
		<b>Supply, deliver and lay copper earth mat, equipment earthing, earth straps, including excavation in all material, risk of collapse, bedding, backfill, compaction and testing at depths up to (See Earth Mat Specifications). All flat copper to be 50 x 3mm in accordance with BS 1432, pickled and annealed (1.35kg/m) and 10mm diameter copper in accordance with BS 1433 annealed black copper (0.701kg/m):</b>				
14,1		1 x 10mm Diameter copper at 0,15m to 1,0m deep.	m	2750	R	-
14,2		Crimp joints 10mm round to round.	No.	143	R	-
14,3		50 x 50 x 12mm Clamp connection with 18mm diameter hole through centre, to take M16 bolt and 10mm diameter rods.	No.	143	R	-
14,4		Terminate round copper earth strap to fence steel posts.	No.	143	R	-

TOTAL excl. VAT- Carried forward to FINAL SUMMARY	R -
---	-----

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	PAY REF	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		<b>SECTION 2: CIVIL WORKS</b>				
		<b>BILL NO. 14</b>				
		<b>HIGH SECURITY CONCRETE WALL</b>				
		<u>Notes to Tenderers:</u>				
		For pricing purposes all items are to be read in conjunction with the tender drawings. No additional compensations will be made for any information shown on the drawings but not mentioned in the Bills of Quantities. The drawings take precedence over the Bills of Quantities.				
		<u>General:</u>				
		All work shall be measured nett as fixed in position, no allowance made for waste.				
		Rates for all items shall include for the supply, installation and connection thereof complete, except where otherwise described.				
1	SANS 1200D	<b>EARTHWORKS</b>				
	SANS 1200D.8.3.3	<u>Restricted Excavation</u>				
1,1	SANS 1200D.8.3.3a	Excavate for restricted foundations, in all materials (includes over-excavation) and use for backfill as ordered	m <sup>3</sup>	858	R	-
		<b>Stockpile and maintain for later re-use</b>				
1,2		Backfill 150mm Rip-insitu layer compacted to 93% Mod. AASHTO maximum density, including working in confined areas.	m <sup>3</sup>	172	R	-
		<u>Extra over for:</u>				
1,3	SABS 1200D.8.3.2b.1	Intermediate excavation	m <sup>3</sup>	858	R	-
1,4	SABS 1200D.8.3.2b.2	Hard rock excavation.	m <sup>3</sup>	86	R	-
1,5	SABS 1200D.8.3.2b.3	Boulder excavation, Class A (including blasting and breaking down of all rock material to rocks / stones of manageable size).	m <sup>3</sup>	43	R	-
1,6	SABS 1200D.8.3.2b.4	Boulder excavation, Class B (including blasting and breaking down of all rock material to rocks / stones of manageable size).	m <sup>3</sup>	43	R	-
		<u>Lab Testing and taking of samples:</u>				
1,4		Modified AASHTO density test (Provisional).	No	20	R	-
2	SANS 1200G	<b>CONCRETE (STRUCTURAL)</b>				
	SANS 1200G.8.4	<b>CONCRETE</b>				
	SANS 1200G.8.4.2	<b>Blinding layer in 15MPa/ 19mm concrete</b>				
2,1		50mm Minimum thick level and stepped as required	m <sup>3</sup>	58	R	-
3		<b>OUTER CONCRETE WALL</b>				
		<b>Supply, deliver and installation of new 2.9m high outer concrete wall complete as detailed on Drawings 054/5846, sheet 1 to 4.</b>				
3,1		2.9m high precast concrete panel wall of 500mm width with drainage opening at the bottom of each panel on both sides, reinforcing mesh REF 341 including lifting devices fixed to reinforcement, with V overhang set up, etc., complete.	m	1430	R	-
		<b>Extra Over</b>				
3,2		Extra over 2,9m high concrete wall fencing for the supply, delivery and installation of a single 8.6m sliding gate with no middle post complete with gate motors (all in accordance with drawing 0.54/10230, Sheet 1 to 6).	No	1	R	-

TOTAL excl. VAT - Carried forward to FINAL SUMMARY							R	-
--	--	--	--	--	--	--	---	---

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	<b>SECTION 2: CIVIL WORKS</b>				
	<b>BILL NO. 15</b>				
	<b>ACCESS CONTROL BUILDING</b>				
	<b>EARTHWORKS (PROVISIONAL)</b>				
	<b>SUPPLEMENTARY PREAMBLES</b>				
	<u>Carting away of excavated material:</u>				
	Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site.				
1	<b>EXCAVATION, FILLING, ETC.</b>				
	<u>Excavation in earth not exceeding 2m deep:</u>				
1,1	Reduced levels under floors.	m <sup>3</sup>	6	R	-
1,2	Trenches.	m <sup>3</sup>	11	R	-
	<u>Extra over all excavations for carting away to a disposal site complying with environmental regulations:</u>				
1,3	Surplus material from excavations and/or stock piles on site to spoil area located by the contractor.	m <sup>3</sup>	13	R	-
	<u>Risk of collapse of excavations:</u>				
1,4	Sides of trench and hole excavations not exceeding 1,5m deep.	m <sup>2</sup>	42	R	-
	<u>Keeping excavations free of water.</u>				
1,5	Keeping excavations free of water.	Item	1	R	-
	<u>Earth filling obtained from the excavations:</u>				
1,6	Backfilling to trenches, holes, etc., and compacted in layers not exceeding 150mm thick to 95% Mod AASHTO density	m <sup>3</sup>	4	R	-
	<u>Earth filling obtained from commercial sources:</u>				
1,7	Filling with selected G7 material supplied and carted onto site by the Contractor, under floors and well compacted in layers not exceeding 150mm thick.	m <sup>3</sup>	6	R	-
	<u>Surface preparation:</u>				
1,8	Trim and level off surface of ground (excavated or filled under this Contract) to receive concrete surface beds or filling, including excavating or filling, ripping and scarifying as necessary and compacting the whole area for a depth of 150mm to a density of at least 95% Mod . AASHTO maximum density (includes part areas to falls).	m <sup>2</sup>	35	R	-
	<u>Tests:</u>				
1,9	Modified AASHTO Density test on earth filling.	No	6	R	-
	<u>Soil insecticide:</u>				
1,10	Under floors, etc., including forming and poisoning shallow furrows against foundation walls etc., filling in furrows and ramming.	m <sup>2</sup>	35	R	-
1,11	To bottoms and sides of trenches, etc.	m <sup>2</sup>	42	R	-
2	<b>CONCRETE, FORMWORK AND REINFORCEMENT</b>				
	<b>SUPPLEMENTARY PREAMBLES</b>				
	<u>Cost of tests</u>				
	The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the architect. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the architect. (Test cubes are measured separately).				

	<b>CONCRETE</b>				
	<u>10MPa/19mm concrete:</u>				
2,10	Blinding in footings.	m³	2	R	-
	<u>25MPa/19mm concrete:</u>				
2,2	Strip footings	m³	5	R	-
2,3	Surface beds cast on waterproofing.	m³	3	R	-
2,4	Apron slabs, steps, etc.	m³	5	R	-
2,5	Roof slabs	m³	2	R	-
	<b>TEST BLOCKS</b>				
2,6	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional).	No	6	R	-
	<u>Expansion joints with 10mm softboard between vertical surfaces:</u>				
2,7	10mm Joints not exceeding 300mm high.	m	42	R	-
	<b>FINISHING TOP SURFACE OF CONCRETE</b>				
	<u>Finishing top surfaces of concrete smooth with a steel trowel:</u>				
2,8	Slabs to falls and currents.	m²	42	R	-
2,9	Concrete aprons	m²	18	R	-
	<b>PERMANENT FORMWORK</b>				
	<u>1.0mm Thick Z275 spelter galvanised commercial quality 50/300 'Bond-Lok' troughed interlocking permanent formwork, with 50mm deep x 300mm wide troughs to:</u>				
2,10	Roof slab propped up exceeding 1,5 and not exceeding 3,5m high.	m²	8	R	-
	<b>MOVEMENT JOINTS, ETC.</b>				
	<u>Slip joint comprising 10mm thick polystyrene built in between horizontal concrete and vertical brick surfaces, sealed along top and bottom edges with 3 ply 'Malthoid' membrane, including cement mortar bed:</u>				
2,11	Not exceeding 300mm high.	m	34	R	-
	<b>REINFORCEMENT</b>				
	<u>Provision for Mild and High tensile steel reinforcement to structural concrete work</u>				
2,12	In varying diameters	t	0,351	R	-
	<u>Fabric reinforcement:</u>				
2,13	Type 193 fabric reinforcement in concrete roof slab	m²	8	R	-
2,14	Type 395 fabric reinforcement in concrete aprons, slabs, etc.	m²	35	R	-
	<b>Total Carried forward</b>			<b>R</b>	<b>-</b>

				<b>Total Brought forward</b>	<b>R</b>	<b>-</b>
3	<b>MASONRY</b>					
	<b>SUPPLEMENTARY PREAMBLES</b>					
	<u>BRICKWORK</u>					
	<u>Sizes in descriptions</u>					
	Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the a brick width of					
	<u>User note</u>					
	The following preamble generally applies for works in hot and humid coastal areas					
	<b>BRICKWORK IN FOUNDATIONS</b>					
	<u>Brickwork in clay facebrick class "FBS" in class II mortar in</u>					
3,1	One brick wall.	m <sup>2</sup>	13	R	-	
	<b>SUPERSTRUCTURE</b>					
	<u>Brickwork in clay facebrick class "FBS" in class II mortar in</u>					
3,2	Piers.	m <sup>2</sup>	23	R	-	
3,3	Half brick wall.	m <sup>2</sup>	14	R	-	
3,4	Half brick walls in beamfilling.	m <sup>2</sup>	10	R	-	
3,5	One brick wall.	m <sup>2</sup>	81	R	-	
	<b>BRICKWORK SUNDRIES</b>					
	<u>Joint forming material in movement joints</u>					
3,6	10mm Bitumen impregnated fibre board built in vertically between brick skins.	m <sup>2</sup>	81	R	-	
	<u>Brickwork reinforcement:</u>					
3,7	75mm wide reinforcement built in horizontally.	m	20	R	-	
3,8	150mm wide reinforcement built in horizontally.	m	241	R	-	
	<u>Prestressed fabricated lintels</u>					
3,9	Lintels in lengths not exceeding 3m.	m	16	R	-	
	<u>Turning pieces</u>					
3,10	230mm Wide turning piece to lintels, etc.	m	16	R	-	
	<u>Galvanized hoop iron cramps, ties, etc.</u>					
3,11	30 x 1,6mm Roof tie 1,5m long with one end fixed to timber and other end built into brickwork.	No.	14	R	-	
	<b>FACE BRICKWORK</b>					
	<b>Light brown 'Corobrik' Fynbos Geel Satin facebrick in stretcher bond. Joints to be solid and vertical joints to be in line(supplied, delivered to site, laying, storage, waste and profit)</b>					
3,12	Extra over for face brickwork with solid pointed concave jointing.	m <sup>2</sup>	91	R	-	
3,13	Extra over for face brickwork with flush mortar jointing.	m <sup>2</sup>	1	R	-	
	<b>FIBRE-CEMENT WINDOW SILLS</b>					
	<u>Nutec fibre cement sills in single lengths bedded in cement mortar including metal fixing lugs etc</u>					
3,14	225 x 10mm Wide sills set flat and slightly projecting	m	4	R	-	
	<b>PAVING (PROVISIONAL)</b>					
	<b>Construction of paving complete:</b>					
3,15	80mm Thick 25MPa precast concrete interlocking block paving of 220 x 97mm grey paving blocks to herringbone pattern, in accordance with SABS Spec.1058, pavers laid to falls on and including, dry riversand joints evenly vibrated.	m <sup>2</sup>	64	R	-	
4	<b>WATERPROOFING</b>					

<b>SUPPLEMENTARY PREAMBLES</b>						
<u>Waterproofing</u>						
Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs.						
<b>DAMPPROOFING OF WALLS AND FLOORS</b>						
<b>One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B)</b>						
4,1	In walls	m <sup>2</sup>	5	R	-	
<b>One layer of 250 micron "Plastall Gundle USB Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</b>						
4,2	Under surface beds.	m <sup>2</sup>	35	R	-	
<b>WATERPROOFING TO ROOFS, BASEMENTS, ETC</b>						
<b>One layer sika sealoflex flexible acrylic waterproofing system with G3 membrane , laid with 75mm side and 100mm end laps</b>						
4,3	On flat roofs (covered entrance)	m <sup>2</sup>	9	R	-	
<b>Total Carried forward</b>					<b>R</b>	<b>-</b>

				<b>Total Brought forward</b>	<b>R</b>	<b>-</b>
5	<b>ROOF COVERINGS, ETC.</b>					
5.1	<b>PROFILED METAL SHEETING AND ACCESSORIES</b>					
	<b>Safintra IBR Profile sheeting</b>					
	<u>AZ150 Prepainted coating system and accessories fixed to timber purlins and assembled as per manufacturer's specifications.</u>					
5.1.1	Roof covering with not exceeding 50 degrees pitch.	m <sup>2</sup>	49		R	-
5.1.2	231 x 254mm Barge flashing.	m	13		R	-
5.1.3	225 x 12mm Fascia board	m	15		R	-
5.1.4	77 x 77mm Overhang flashing.	m	13		R	-
5.2	<b>ROOF INSULATION</b>					
	<b>4mm "Alucushion Bubblefold" single sided aluminium foil faced insulation material in 1250mm widths with white polyethylene facing downwards with 100mm laps at all joints:</b>					
5.2.1	Insulation laid taut over rafters (at approximately 600mm centres) and fixed concurrent with tiling battens, purlins, etc.	m <sup>2</sup>	49		R	-
6	<b>CARPENTRY AND JOINERY</b>					
	<b>SUPPLEMENTARY PREAMBLES</b>					
	Particle board:					
	<u>Particle board shall comply with the following specifications:</u>					
	a) SABS 1300 Particle board: exterior and flooring type.					
	b) SABS 1301 Particle board: interior type.					
	<u>Joinery:</u>					
	Descriptions of frames shall be deemed to include frames, transomes, mullions, rails, etc.					
	Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes.					
	<u>Fixing</u>					
	Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.					
6.1	<b>ROOFS, ETC</b>					
	<b>PLATE NAILED TIMBER ROOF TRUSS CONSTRUCTION</b>					
	<b>Trusses are at maximum 900mm centres.</b>					
	<b>Roof covering is profiled metal sheeting on purlins. Ceilings are 1200mm sheeting on 38 x 38mm brandering.</b>					
	<u>Sawn softwood</u>					
6.1.1	Roof construction to mono-pitched flat roof approximately 6500 x 7500m overall, including wall plates, trusses, permanent bracing and nailed at 152 x 38 SAP wallplate fixed over underlay (underlay elsewhere).	No	1		R	-
	<u>Sundries</u>					
6.1.2	Two coats creosote on sawn timbers (Provisional).	m <sup>2</sup>	18		R	-
	<b>EAVES, VERGES, ETC</b>					
	<u>"Everite FC77" pressed fibre-cement</u>					
6.1.3	231 X 77mm barge board fixed upside down.	m	13		R	-
6.2	<b>SKIRTINGS</b>					
	<u>Supawood skirting with arris rounded top edge:</u>					
6.2.1	75 x 19mm Supawood skirting with arris rounded top edge:	m	9		R	-
6.3	<b>DOORS, ETC.</b>					

	<u>Wrought meranti doors hung to steel frames (elsewhere measured):</u>					
6.3.1	40mm Framed meranti two panel decorators door 813 x 2032mm high with concealed hardwood edges.	No	2		R	-
6.4	<b>WORKTOPS</b>					
	<u>32mm Thick post formed lifeseal worktop, using high moisture resistant bisonboard, to approved colour:</u>					
6.4.1	Counter top size 2000mm long x 600mm wide	No	1		R	-
6.4.2	Extra over for forming bullnose front edge.	m	2		R	-
6.5	<b>BUILT IN KITCHEN CUPBOARD</b>					
	<u>Cupboards formed of 16mm Bisonlam white melamine faced particle board carcass and shelving, and 18mm white Supalam laminated supawood doors and sides, and all exposed edges to have PVC edging strips:</u>					
6.5.1	Cupboard size 1200 x 600mm on plan.	No	1		R	-
	<b>SHELVING IN PANEL ROOM</b>					
	<u>Linvar Storage Systems</u>					
6.5.2	Type "Linspace" single entry bay 1000 x 2200 x 500mm deep plugged to wall, complete with uprights, top and base, and 4 shelves (Order: NSBAYSOPK1, Tel: 0800-011-0468).	No	1		R	-
7	<b>CEILINGS, PARTITIONS AND ACCESS FLOORING</b>					
	<b>CEILINGS, ETC.</b>					
7.1	<b>NAILED UP CEILINGS</b>					
	<u>"Isotherm" Polyester insulation</u>					
7.1.1	50mm Insulation closely fitted and laid on top of branderling between roof timbers, etc.	m <sup>2</sup>	22		R	-
	<u>6.4mm Gypsum plasterboard with H-type pressed steel jointing strips</u>					
7.1.2	Ceilings in 1200mm sheets including 38 x 38mm sawn softwood branderling at 400mm centres.	m <sup>2</sup>	22		R	-
7.1.3	Extra over ceiling for 610 x 610mm trap door of 50 x 76mm wrought softwood rebated framing with one 38 x 38mm sawn softwood cross brander covered with ceiling board and fitted flush in opening.	No	1		R	-
	<u>Moulded cornices</u>					
7.1.4	75mm gypsum cornice fixed with acrylic sealer.	m	31		R	-
7.2	<b>ACCESS FLOORING</b>					
	<b>Supply and install access floor system to Eskom approval. Panels to be 600 x 600mm snap-on stringer system capable of supporting a design load of 7,2KN/m2. The panels are to be covered with high pressure 3,2mm laminate</b>					
	Heavy duty access flooring of modular and self-supporting floor structure bolted together, with gravity placed floor panels on top of and including pedestal supports, lifting device, head brackets, etc., complete. Bolted to floor with 600 x 600mm wood-core panels covered with factory applied high pressure coloured laminate to finish approximately 60mm above concrete sub floor.	m <sup>2</sup>	6		R	-
7.2.2	Extra over for 150 x 600mm purpose made aluminium louvres in access floor.	No.	1		R	-
7.2.3	Hole size 600 x 800 mm through access flooring.	No.	1		R	-
7.2.4	Hole size 600 x 600 mm through access flooring.	No.	1		R	-
7.2.5	Hole size 600x 1200 mm through access flooring.	No.	1		R	-
	<b>Total Carried forward</b>				<b>R</b>	<b>-</b>

				<b>Total Brought forward</b>	<b>R</b>	<b>-</b>
8	<b>IRONMONGERY</b>					
8,1	<b>HINGES, BOLTS, ETC.</b>					
	<u>Brass:</u>					
8.1.1	100mm Butt hinge.	No	4		R	-
	<b>LOCKS</b>					
8.1.2	1 Dorma D0365 EURO profile cylinder sash lock pb.	No	2		R	-
8.1.3	1 Dorma DKC056500 BRASS 65mm five pin euro profile knob cylinder.	No	2		R	-
8.1.4	1 Dorma DHC-ss-031B stainless steel hat and coat hook with rubber buffer.	No	2		R	-
8.1.5	1 Set Dorma DIB-ss-026 stainless steel bathroom /wc indicator bolt.	No	1		R	-
8.1.6	Dorma CB17 PB CYL Brass Lever handle.	No	2		R	-
	<u>Weatherstrips:</u>					
8.1.7	Weatherguard sealing strip fixed to bottom of 970 mm wide single door.	No.	2		R	-
8,2	<b>BATHROOM FITTINGS</b>					
8.2.1	19mm Diameter chromium plated towel rail 450mm long including end brackets.	No	1		R	-
8,3	<b>SUNDRY FITTINGS</b>					
	<u>Linvar Storage Systems:</u>					
8.3.1	Supply and position suitably, 0.6mm Sheet metal powder coated single tier locker size 1750 x 305 x 450mm deep.	No.	2		R	-
8.3.2	Supply and suitably fix to brick wall and concrete floor, rifle safe size 500mm wide x 500mm deep x 1400mm high.	No	1		R	-
	<b>SUNDRIES</b>					
8.3.3	70 x 150mm Hat and coat hook fixed to brickwork	No	2		R	-
9	<b>STRUCTURAL STEELWORK</b>					
	<u>User note</u>					
	Consideration is to be given in specific applications (eg where "heavy" steel structures such as in industrial plants, towers for mine shafts, etc are dominant) to implement the principles laid down by the "Measurement for Structural Steelwork" as prepared and recommended by the South African Institute of Steel Construction					
	<b>SUPPLEMENTARY PREAMBLES</b>					
	Descriptions					
	Descriptions of bolts shall be deemed to include nuts and washers					
	Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete					
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete					
	<b>Structural steel of Grade 300WA steel, factory primed to Eskom specifications:</b>					
9,1	<b>WINDOW STEEL AWNING</b>					
	<u>Window steel awning comprising 185 x 1285 x 3mm mild steel plate, 50 x 50 x 3mm angle section welded to channel section, 20mm mild steel round bar welded to flats with 5mm fillet weld, including wall anchor plates and bolts, supplied and installed complete:</u>					
9.1.1						
9.1.2	Window Awning size 1300 x 755mm on plan	No.	3		R	-
9,2	<b>BEAMS</b>					
	Welded and bolted beams, etc.					

	<u>203x133x25 x 25.1 kg/m Beam with angle section cleats, flat section heads, connection plates, bolts, etc.</u>				
9.2.1	Supply and fabrication of steel beams, bracing, bolts, etc.	t	0,237	R	-
9.2.2	Delivery of structural steelwork to site.	t	0,237	R	-
9.2.3	Offloading, stacking on site, and erection of steelwork in final position complete.	t	0,237	R	-
10	<b>METALWORK</b>				
	<b>SUPPLEMENTARY PREAMBLES</b>				
	<u>Descriptions</u>				
	Descriptions of bolts shall be deemed to include nuts and washers				
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete				
	Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described				
10.1	<b>"O-LINE" TRUNKING</b>				
	<u>Type Gridspan GS50 with standard finish:</u>				
10.1.1	Horizontally suspended from ceiling timbers with OL 1000 trapeze hangers at 2m centres, etc.	m	10	R	-
10.1.2	Vertically fixed to OL 1000 channels surface mounted to brickwork.	m	5	R	-
10.2	<b>PRESSED STEEL DOOR FRAMES</b>				
	<u>1.2mm Thick pressed metal door frame to suit half brick wall:</u>				
10.2.1	Frame size 813 x 2032mm high.	No	2	R	-
	<u>Level G3 bullet resistant Anti-bandit door, complete with 100 x 50 x 3mm gauge mild steel rectangular frame and 25 x 25 x 3mm MS angle rebates, overall size 970 x 2110mm high in powder coating and or galvanised cladding with 280mm x 380mm high peep hole, supplied with a 6 pin tumbler key system, mortice dead lock with an additional heavy duty magnetic lock and striker including key switch and surface mounted casing, 6 Amp power supply, push buttons and interlock system, heavy duty aluminium continuous hinge, 5 aluminium slam bar with heavy duty door closer and D-style pull handles. Door to comply to SABS 1658- 1996</u>				
10.2.2	Level G3 bullet resistant anti-bandit external door	No.	1	R	-
10.3	<b>ALUMINIUM WINDOWS</b>				
	<u>Aluminium windows with top hung opening sections and brown anodised finish, all as per AAAMSA specifications and all glazing to be done according to the National Building Regulations - Part N:</u>				
10.3.1	Window W1 size 900 x 900mm high with 54mm clear bullet proof glass level G3.	No	3	R	-
10.3.2	Window W2 size 600 x 900mm high top hung casement window, with 4mm obscure glass and fitted with burglar bars, bolted to wall with 4 No. off 10mm anchor bolts, all as per detail drawing.	No	1	R	-
	<b>Total Carried forward</b>			<b>R</b>	<b>-</b>

				<b>Total Brought forward</b>	<b>R</b>	<b>-</b>
11	<b>PLASTERING</b>					
11,1	<b>SCREEDS</b>					
	<u>Screeds on concrete</u>					
	<u>1:4 Cement plaster screeds steel trowelled on concrete:</u>					
11.1.1	25mm Thick on floors and landings.	m <sup>2</sup>	25	R	-	
11,2	<b>INTERNAL PLASTER</b>					
	<u>Cement plaster 1:5 wood floated on brickwork:</u>					
11.2.1	On walls.	m <sup>2</sup>	28	R	-	
	<u>One coat cement plaster 1:5 wood floated and sponged to smooth finish on brickwork:</u>					
11.2.2	On walls.	m <sup>2</sup>	75	R	-	
11,3	<b>EXTERNAL PLASTER</b>					
	<u>Scratch woodfloat plaster bonded to wall with chickenmesh tightly spanned and fixed to wall:</u>					
11.3.1	30mm Thick on walls.	m <sup>2</sup>	19	R	-	
	<u>Smooth wood float plaster with coprox - plarox dual coating</u>					
11.3.2	85mm high plastered corbel protruding 50mm.	m <sup>2</sup>	5	R	-	
11,4	<b>DIVIDING STRIPS, ETC.</b>					
11.4.1	50 x 3mm Flat section brass dividing strips between different floor finishes.	m	1	R	-	
11.4.2	50 x 3 mm Brass water bar.	m	1	R	-	
12	<b>TILING</b>					
	<b>Descriptions</b>					
	<b>Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding.</b>					
12,1	<b>WALL TILING</b>					
	<u>300 x 300mm CTM Kilimanjaro tiles fixed with adhesive to plaster:</u>					
12.1.1	On walls.	m <sup>2</sup>	30	R	-	
12.1.2	PVC edging strips	m	8	R	-	
12,2	<b>FLOOR TILING</b>					
	<u>350 x 350m CTM Kilimanjaro tiles:</u>					
12.2.1	On floors and landings to falls.	m <sup>2</sup>	25	R	-	
12.2.2	On treads and risers of stairs.	m <sup>2</sup>	3	R	-	
12.2.3	Skirting tile fixed with uncut edge to top.	m	14	R	-	
12,3	<b>TOILET PAPER HOLDERS, ETC.</b>					
	<u>"Cobra" white glazed ceramic:</u>					
12.3.1	150 x 150mm cobra semi-recessed white vitreous china toilet paper holder.	No.	1	R	-	
	<u>"Genesis" aluminium stair nosings:</u>					
12.3.2	44 x 10mm aluminium tile-in stair nosing.	m	13	R	-	
13	<b>PLUMBING AND DRAINAGE (PROVISIONAL)</b>					
	<b>SUPPLEMENTARY PREAMBLES</b>					
	<u>uPVC pipes and fittings:</u>					
	Soil, waste and vent pipes and fittings shall be solvent weld jointed.					

	<p><u>uPVC pressure pipes and fittings:</u></p> <p>Pipes for water supply shall be of the class stated.</p> <p>Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.</p> <p>Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.</p> <p><u>Copper pipes:</u></p> <p>Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground</p> <p><u>Exposed concrete surfaces:</u></p> <p>Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc. shall be finished smooth with plaster</p> <p><u>Excavations:</u></p> <p>No claim for rock excavation will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling</p> <p>"Earth", "Soft rock" and "hard rock" shall be as defined in "Earthworks"</p> <p><u>Laying, backfilling, bedding, etc. of pipes</u></p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions</p> <p>Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following:</p> <p>SABS 1200 L : Medium-pressure pipelines</p> <p>LD : Sewers</p> <p>LE : Stormwater drainage</p> <p>Pipe trenches etc. shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200</p> <p>DB : Earthworks (Pipe trenches)</p> <p>Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200</p> <p>LB : Bedding (Pipes).</p> <p>Unless otherwise described bedding of rigid pipes shall be class B bedding</p> <p><u>Flush pans</u></p> <p>Flush pans shall have straight or side outlets and "P" or "S" traps as necessary</p> <p><u>Stainless steel basins, sinks, wash troughs, urinals, etc.</u></p> <p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable</p> <p><u>Waste unions</u></p> <p>Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings</p>					
13,1	<b>STORMWATER DRAINAGE</b>					
	<u>Sumps, catchpits, inspection chambers, etc. (gratings and covers elsewhere):</u>					
13.1.1	Rainwater sump size 750 x 750mm and not exceeding 1000mm deep internally.	No	1		R	-
13.1.2	600 x 600mm x 50kg Cast iron dished grating and frame.	No	1		R	-
13,2	<b>RAINWATER DISPOSAL</b>					
	<b>GUTTERS, ETC.</b>					
	<u>0.8mm Thick pre-painted aluminium sheeting in:</u>					
13.2.1	150 x 150mm Eaves gutters	m	8		R	-
13.2.2	Extra over 150 x 150mm eaves gutter for outlet for 100 x 100mm pipe	No	2		R	-

13.2.3	Extra over 150 x 150mm eaves gutter for angle or stopped end	No	2	R	-
13.2.4	100 x 100mm Downpipes	m	8	R	-
13.2.5	Extra over 100 x 100mm rainwater pipe for shoe	No	2	R	-
13.2.6	Extra over 100 x 100mm rainwater pipe for eaves or plinth offset 700mm projection	No	2	R	-
	<u>Marley Streamline' uPVC</u>				
13.2.7	75mm Diameter rainwater pipes.	m	4	R	-
13.2.8	Extra over 75mm diameter rainwater pipe for bend.	No	1	R	-
	<u>Fulbore' cast iron outlets</u>				
13.2.9	100mm Diameter 90 Degree side outlet.	No	1	R	-
13,3	<b>DRAINAGE</b>				
	<b>PIPING, ETC.</b>				
	<u>Rigid PVC drainage pipes:</u>				
13.3.1	100mm Pipe (No excavation).	m	3	R	-
13.3.2	100mm Pipes laid in and including trenches not exceeding 1m deep.	m	150	R	-
	<u>Extra over rigid uPVC pipes for fittings:</u>				
13.3.4	100 mm Bend.	No	6	R	-
13.3.5	100 mm Bend with cleaning eye.	No	3	R	-
13.3.6	100 mm Junction.	No	6	R	-
13.3.7	100 mm Junction with cleaning eye.	No	3	R	-
	<b>Total Carried forward</b>			<b>R</b>	<b>-</b>

				<b>Total Brought forward</b>	<b>R</b>	<b>-</b>
13,4	<b>PIPES</b>					
	<u>Rigid PVC pipes:</u>					
13.4.1	160 mm Pipe laid in and including trenches not exceeding 1m deep.	m	100	R	-	
13.4.2	160 mm Long radius bend.	No	5	R	-	
	<u>Rigid PVC waste pipes:</u>					
13.4.3	38 mm Pipe.	m	50	R	-	
13.4.4	50 mm Pipe.	m	50	R	-	
13.4.5	100 mm Pipe.	m	100	R	-	
	<u>Extra over rigid PVC waste pipes for fittings:</u>					
13.4.6	100 mm Pan connector.	No	1	R	-	
13.4.7	38 mm Bend with cleaning eye.	No	5	R	-	
13.4.8	50 mm Bend with cleaning eye.	No	5	R	-	
13.4.9	100 mm Bend with cleaning eye.	No	5	R	-	
13.4.10	50 mm Junction with cleaning eye.	No	5	R	-	
13.4.11	100 mm Junction with cleaning eye.	No	5	R	-	
13.4.12	100 mm Two-way vent valve.	No	2	R	-	
	<u>Sundries</u>					
13.4.13	Testing drainage pipe system.	Item	1	R	-	
13,5	<b>WATER SUPPLY</b>					
	<u>Megapipe: HDPE (high density polyethylene) Type 6 SABS</u>					
13.5.1	25mm Pipes laid in and including trenches not exceeding 1m deep, including all fittings, etc.	m	150	R	-	
13.5.2	50mm Pipes laid in and including trenches not exceeding 1m deep, including all fittings, etc.	m	150	R	-	
	<b>Pipe encasing</b>					
13.5.3	Encase pipe in concrete including all necessary formwork.	m	150	R	-	
	<u>Sundries</u>					
13.5.4	100mm PVC cleaning eye, including 300 mm x 300 mm cast iron cover and frame, laid in ground.	No.	2	R	-	
13.5.5	Test water supply pipe system.	Item	1	R	-	
13,6	<b>GULLEYS, ETC.</b>					
	<b>Precast concrete:</b>					
13.6.1	100 mm Gulley not exceeding 1,0 m deep to invert, fitted with a galvanised cast iron hinged grating, frame and P-trap, etc.	No.	1	R	-	
13,7	<b>SANITARY FITTINGS</b>					
	<b>"Vaal Potteries Vitreous China" type</b>					
13.7.1	Close coupled WC suite, complete with P-trap, 9 litre inlet cistern, lid and flushpipe, handle and "Hart Celmac A" double flap heavy duty white plastic seat.	No.	1	R	-	
13.7.2	455 x 290 mm Bantam white wash hand basin with one taphole configuration, complete with waste, grid, plug and chain supported on a full universal floor mounted pedestal and "Cobra (111-15) Star CP pillar tap	No.	1	R	-	
	<b>Preperation bowl</b>					
13.7.3	"Citimetal" stainless steel economy type grade 430 preparation bowl complete with rubber trap, waste, grid, plug and chain including with "Cobra 113" pillar tap with star tye handle	No.	1	R	-	
13,8	<b>WASTE UNIONS, TRAPS, ETC.</b>					
13.8.1	40 mm rubber P-trap.	No.	1	R	-	
13.8.2	40 x 32 mm "Cobra" (350) CP bottle trap.	No.	1	R	-	

13,9	<b>TAPS, VALVES, ETC.</b>				
	<u>Copper:</u>				
13.9.1	15 mm Service pipe 380 mm girth with two brass cap nuts.	No.	2	R	-
	<u>Chromium-plated</u>				
13.9.2	"Cobra" (232/350) 15 mm angle regulating valve	No.	2	R	-
	<u>Brass</u>				
13.9.3	25 mm gate valve.	No.	1	R	-
13.9.4	50 mm gate valve.	No.	1	R	-
	<u>Cobra" type</u>				
13.9.5	50mm No. 128 Stopcock.	No.	2	R	-
13,10	<b>TANKS, GEYSERS, ETC.</b>				
	<u>Approved Type</u>				
13.10.1	5 litre Kwikkot kwikboil instant boiling water dispenser.	No.	1	R	-
	<b>HOLES</b>				
	<u>Leave or form hole for not exceeding 100 mm pipe</u>				
13.10.2	Half brick wall.	No.	1	R	-
13.10.3	One brick wall fire fighting equipment.	No.	2	R	-
	<b>Fire fighting equipment</b>				
	<u>Approved Type</u>				
13.10.4	4,5 kg Dry chemical fire extinguisher including 100mm x 450mm x 25mm polished hardwood back board with chamfered edges, fixed to brickwork.	No	1	R	-
13,11	<b>SLEEVES</b>				
	<u>uPVC pipes</u>				
13.11.1	100mm Diameter uPVC conduit fixed to brickwork.	m	3	R	-
13.11.2	Set of 3 no. x 160mm diameter uPVC pipes stacked in triangular shape, including excavation, backfilling and compacting, laying in cable trench, etc., complete.	m	3	R	-
13,12	<b>BUDGETARY ALLOWANCE</b>				
	<b>SUPPLEMENTARY PREAMBLES</b>				
	<b>Specifications, drawings, etc</b>				
	<b>Tenderers are referred to the specification and drawings prepared by Eskom engineering, annexed to these bills of quantities (accompanying these bills of quantities), or the plumbing work, for the full descriptions of the following items which are to be read and priced in conjunction with the said specification and drawings</b>				
13.12.1	Provide the budgetary allowance for the plumbing installation complete including profit.	Sum	1	R	-
14	<b>ELECTRICAL WORK</b>				
	<b>MEASUREMENT AND PAYMENT NOTES</b>				
	<b>SUPPLEMENTARY PREAMBLES</b>				
	<b>Specifications, drawings, etc</b>				
	<b>Tenderers are referred to the specification and drawings prepared by Eskom engineering, annexed to these bills of quantities (accompanying these bills of quantities), or the electrical work, for the full descriptions of the following items which are to be read and priced in conjunction with the said specification and drawings</b>				
14,1	<b>BUDGETARY ALLOWANCE</b>				
14.1.1	Provide the budgetary allowance for the electrical installation complete including profit.	Sum	1	R	-
14.1.2	Provide a sum for testing and commissioning of electrical installations. (Certificate of Compliance to be provided).	Sum	1	R	-

--

Total Carried forward

--

<b>R</b>	-
----------	---



17.6.2	<p>One coat wood primer and two coats "Plascon Velvaqlo" paint:                  On skirtings not exceeding 300mm girth, painted before fixing in position.</p>	m	9		R -
<b>TOTAL excl. VAT- Carried forward to FINAL SUMMARY</b>					<b>R -</b>

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	<b>SECTION 2: CIVIL WORKS</b>				
	<b>BILL NO. 16</b>				
	<b>CONTROL BUILDING</b>				
<b>A</b>	<b>DEMOLITIONS AND ALTERATIONS (PROVISIONAL)</b>				
1	<b>REMOVAL OF EXISTING WORK</b>				
1,1	<b>FLOOR FINISHES</b>				
	<u>Hacking up/off and removing raised access floor modular panels including steel support structure</u>				
1.1.1	Control room	m <sup>2</sup>	110	R	-
	<u>Remove all carpet tiles completely and mechanically remove the existing glue and paint to sound concrete by enclosed shot blasting or scarification. Remove all residue to leave a dry and dust free open textured surface</u>				
1.1.2	Utility room	m <sup>2</sup>	18	R	-
	<u>Remove all damaged floor tiles complete</u>				
1.1.3	Entrance porch	m <sup>2</sup>	7	R	-
1,2	<b>CEILINGS</b>				
	<u>Remove insulation material in the ceiling void and vacuum extensively.</u>				
1.2.1	Entrance porch	m <sup>2</sup>	7	R	-
1.2.2	Control room	m <sup>2</sup>	110	R	-
	<u>Strip and remove damaged ceiling to a registered site, if tested positive for asbestos. If tested negative for asbestos, the ceiling is to be cleaned</u>				
1.2.3	Battery room	m <sup>2</sup>	64	R	-
1.2.4	Ablutions	m <sup>2</sup>	8	R	-
1.2.5	Utility room	m <sup>2</sup>	18	R	-
1.2.6	Control room	m <sup>2</sup>	110	R	-
1.2.7	Entrance porch	m <sup>2</sup>	7	R	-
1.2.8	Roof eaves	m <sup>2</sup>	10	R	-
1,3	<b>WALL FINISHES</b>				
	<u>Clean existing wall tiles and grout to remove stains and dirt</u>				
1.3.1	Ablutions	m <sup>2</sup>	1	R	-
1.3.2	Battery room	m <sup>2</sup>	5	R	-
	<u>Sand down, remove all loose and flaking paint and prepare wall for painting</u>				
1.3.4	Control room	m <sup>2</sup>	198	R	-
1.3.5	Battery room	m <sup>2</sup>	95	R	-
1.3.6	Ablution	m <sup>2</sup>	5	R	-
1.3.7	Utility room	m <sup>2</sup>	51	R	-
	<u>All skirtings to be removed and wall to be prepared for tile skirting</u>				
1.3.8	Entrance porch	m	9	R	-
1,4	<b>DOORS AND WINDOWS</b>				

	<u>Sand down existing paint</u>				
1.4.1	On doors.	m <sup>2</sup>	21	R	-
1.4.2	On door frames.	m <sup>2</sup>	11	R	-
1.4.3	Burglar guards to windows	m <sup>2</sup>	2	R	-
1.4.4	Steel posts	m <sup>2</sup>	1	R	-
	<u>Clean and refurbish all existing ironmongery</u>				
1.4.5	Hinges	No.	20	R	-
1.4.6	Door handles	No.	8	R	-
1.4.7	Towel rails	No.	1	R	-
	<u>Paint to be scraped off, make good all defects on putty</u>				
1.4.8	Ablutions	No	4	R	-
1.4.9	Utility room	No	5	R	-
	<u>Existing internal window sills to be tested for asbestos. If tested positive, The asbestos material shall be safely removed to a registered site.</u>				
1.4.10	Ablutions	No	4	R	-
1.4.11	Utility room	No	5	R	-
	<u>Taking out, removing and setting aside air vent covers, clean or power wash for re-use and later refixing in same position.</u>				
1.4.12	Battery room	No	2	R	-
1.5	<b>ROOFING</b>				
	<u>Roof tiles</u>				
1.5.1	Remove mortar fill on the ridge tiles	m	63	R	-
1.5.2	Remove roof tiles	m <sup>2</sup>	335	R	-
	<u>Strip and remove asbestos barge and fascia boards to a registered site.</u>				
1.5.3	Barge and Fascia boards	m	90	R	-
	<u>Taking out and removing complete existing rainwater pipes</u>				
1.5.3	Gutters	m	90	R	-
1.5.4	Downpipes	m	29	R	-
	<b>Total Carried forward</b>			<b>R</b>	<b>-</b>

				<b>Total Brought forward</b>	
				<b>R</b>	<b>-</b>
<b>B</b>	<b>MASONRY</b>				
1	<b>FIBRE-CEMENT WINDOW SILLS</b>				
1.1	175mm Wide sills set flat and slightly projecting	m	5	R	-
2	<b>JOINTS, ETC</b>				
2.1	<u>Seal cracks on internal walls with Epoxy resin.</u>				
2.1.1	Control room	m	20	R	-
2.1.2	Ablutions	m	10	R	-
2.1.3	Office room	m	20	R	-
2.1.4	Battery room	m	20	R	-
2.2	<u>Seal cracks on internal walls with Epoxy resin.</u>				
2.2.1	Loose bricks on external facebricks	m	20	R	-
3	<b>LOUVRES, AIR VENTS, ETC.</b>				
3.1	<u>Freudenberg Technologies or Similar approved'</u>				
3.1.1	600 x 600mm Alupleat washable air filter panel with aluminium holding frame fitted with WB66 230 Winblock with small rebate on the outside.	No	1	R	-
4	<b>CARPENTRY AND JOINERY</b>				
	<b>Particle board:</b>				
	<b>Particle board shall comply with the following specifications:</b>				
	<b>a) SABS 1300 Particle board: exterior and flooring type.</b>				
	<b>b) SABS 1301 Particle board: interior type.</b>				
4.1	<b>ROOFS, ETC.</b>				
4.1.1	Align roof tiles and ridge with correct overlap on the ridge	m <sup>2</sup>	168	R	-
4.1.2	Mortar fill to ridge tiles	m	63	R	-
4.2	<b>EAVES, VERGES, ETC</b>				
	<u>Nutec fibre-cement</u>				
4.2.1	Barge and Fascia board	m	90	R	-
5	<b>CEILINGS, PARTITIONS AND ACCESS FLOORING</b>				
	<b>CEILINGS, ETC.</b>				
5.1	<b>INSULATION</b>				
	<u>100mm Aerolight (Think Pink) Insulation closely fitted and laid on top of brandering between roof timbers, etc.</u>				
5.1.1	Battery room	m <sup>2</sup>	64	R	-
5.1.2	Ablutions	m <sup>2</sup>	8	R	-
5.1.3	Utility room	m <sup>2</sup>	18	R	-
5.1.4	Control room	m <sup>2</sup>	110	R	-
5.1.4	Entrance porch	m <sup>2</sup>	7	R	-
5.2	<b>CEILINGS</b>				
	<u>600 x 600mm lay-in ceiling tiles fixed to existing ceiling grid</u>				
5.2.1	Control room	m <sup>2</sup>	110	R	-

	<u>10mm thick Rhinoboard with H-type pressed steel jointing strips screwed on to existing branderling</u>				
5.2.2	Battery room	m <sup>2</sup>	64	R	-
5.2.3	Ablutions	m <sup>2</sup>	8	R	-
5.2.4	Utility room	m <sup>2</sup>	18	R	-
	<u>4mm Everite Nutec ceiling board fixed to 38 x 38mm SAP branderling with 32 x 2.5mm galvanised ceiling nails with H-profile jointing strips sealed with fibatape and rhinolite.</u>				
5.2.5	Entrance porch	m <sup>2</sup>	7	R	-
	<b>Total Carried forward</b>			<b>R</b>	<b>-</b>

				<b>R</b>	-
<b>Total Brought forward</b>					
<b>5.3</b>	<b>CORNICES</b>				
	<u>76mm polystyrene cornice.</u>				
5.3.1	Battery room	m	32	R	-
5.3.2	Ablutions	m	12	R	-
5.3.3	Utility room	m	17	R	-
5.3.4	Control room	m	66	R	-
	<u>75mm Cove polysterene cornice fixed with alcolin cornice adhesive</u>				
5.3.5	Entrance porch	m	9	R	-
	<u>Extra over ceilings for</u>				
5.3.6	610 x 610mm trap door of 50 x 76mm wrought softwood rebated framing with one 38 x 38mm sawn softwood cross brander covered with ceiling board and fitted flush in opening.	No	1	R	-
<b>6</b>	<b>ACCESS FLOORING</b>				
	<u>Supply and install access floor system to Eskom approval. Panels to be 600 x 600mm snap-on stringer system capable of supporting a design load of 7.2KN/m2. The panels are to be covered with high pressure 3.2mm laminate:</u>				
6.1	Heavy duty access flooring with snap together system including stringers, and pedestals bolted to floor with 600 x 600 mm panels finished with powder coating and covered with 3.2 mm laminate to finish between 800 and 900 mm above concrete sub floor.	m <sup>2</sup>	110	R	-
6.2	Extra over for 150 x 600mm purpose made aluminium louvres in access floor.	No.	5	R	-
6.3	Hole size 600 x 800 mm through access flooring.	No.	10	R	-
6.4	Hole size 600 x 600 mm through access flooring.	No.	10	R	-
6.5	Hole size 600x 1200 mm through access flooring.	No.	10	R	-
<b>7</b>	<b>IRONMONGERY</b>				
	<u>Clean and refurbish ironmongery</u>				
7.1	Hinges	No.	20	R	-
7.2	Door handles	No.	8	R	-
7.3	Towel rails	No.	1	R	-
<b>8</b>	<b>TILING</b>				
	<b>Descriptions</b>				
	<b>Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding.</b>				
8.1	<b>WALL TILING</b>				
	<u>200 x 200 x 5mm Group B or equally approved white glazed tiles glued to walls with cement based tile adhesive and white acid resistant cement based grout.</u>				
8.1.1	Battery room	m <sup>2</sup>	5	R	-
	<u>200 x 200 x 5mm Group B or equally approved white glazed tiles glued to walls with cement based tile adhesive and white cement based grout.</u>				
8.1.2	Ablutions	m <sup>2</sup>	1	R	-
	<u>Matching PVC edging strips to edges of wall.</u>				
8.1.3	Battery room	m	10	R	-
8.1.4	Ablutions	m	4	R	-
<b>Total Carried forward</b>				<b>R</b>	-

				<b>Total Brought forward</b>	
				<b>R</b>	<b>-</b>
8.2	<b>FLOOR TILING</b>				
	<b>JOHNSON' PORCELAIN TILES (NON SLIP)</b>				
	<u>On floors and landings to falls.</u>				
8.2.1	Entrance porch	m <sup>2</sup>	7	R	-
8.2.3	Utility room	m <sup>2</sup>	18	R	-
	<u>90mm Skirting tile fixed with uncut edge to top.</u>				
8.2.4	Battery room	m	32	R	-
8.2.5	Control room	m	66	R	-
8.2.6	Utility room	m	17	R	-
8.2.7	Entrance porch	m	9	R	-
	<u>44 x 10mm "Genesis" aluminium straight edge trim to top of skirting tile and edge of floor</u>				
8.2.8	Battery room	m	32	R	-
8.2.9	Control room	m	66	R	-
8.2.10	Utility room	m	17	R	-
8.2.11	Entrance porch	m	9	R	-
9	<b>PLUMBING AND DRAINAGE</b>				
9.1	<b>RAINWATER DISPOSAL</b>				
	<b>GUTTERS, ETC.</b>				
	<u>0.8mm Thick pre-painted aluminium sheeting in:</u>				
9.1.1	150 x 150mm eaves gutters.	m	90	R	-
9.1.2	Extra over 150 x 150mm eaves gutter for outlet for 100 x 100mm pipe.	No.	9	R	-
9.1.3	Extra over 150 x 150mm eaves gutter for angle.	No.	7	R	-
9.1.4	100 x 100mm downpipes.	m	29	R	-
9.2	<b>FIRE FIGHTING EQUIPMENT</b>				
9.2.1	Supply and install 9 kg Dry chemical fire extinguisher including 100mm x 450mm x 25mm polished hardwood back board with chamfered edges, fixed to brickwork.	No.	1	R	-
9.2.2	Supply and install 9 kg CO2 fire extinguisher including 100mm x 450mm x 25mm polished hardwood back board with chamfered edges, fixed to brickwork.	No.	1	R	-
10	<b>PAINTWORK</b>				
10.1	<b>ON FLOATED PLASTER</b>				
	<b>One coat alkali resistant primer and two coats " prominent sheen acrylic"</b>				
	<u>On internal walls.</u>				
10.1.1	Control room	m <sup>2</sup>	198	R	-
10.1.2	Entrance porch	m <sup>2</sup>	19	R	-
10.1.3	Ablution	m <sup>2</sup>	5	R	-
10.1.4	Utility room	m <sup>2</sup>	51	R	-
10.2	<b>ON RHINOBOARD</b>				
	<b>Two coats Acrylic polvin paint to manufacturer's specifications</b>				
	<u>On ceilings and cornices.</u>				
10.2.1	Battery room	m <sup>2</sup>	64	R	-
10.2.2	Ablutions	m <sup>2</sup>	8	R	-
10.2.3	Utility room	m <sup>2</sup>	18	R	-
10.2.4	Control room	m <sup>2</sup>	110	R	-

	<b>Three coats "Dulux Sigmacover CM" Coating as per manufacturer's specifications</b>			
	<u>On ceilings and cornices.</u>			
10.2.5	Entrance porch	m <sup>2</sup>	7	R -
	<b>Total Carried forward</b>			<b>R -</b>

					<b>Total Brought forward</b>	
					<b>R</b>	<b>-</b>
10,3	<b>ON FIBRE-CEMENT</b>					
	<b>One coat primer and two coats "Prominent" Satin silk exterior acrylic paint</b>					
10.3.1	On fascias and barge boards.	m <sup>2</sup>	41		R	-
10.3.2	Window sills	m	5		R	-
10,4	<b>ON METAL</b>					
	<u>Two coats enamel paint as per manufacturer's specifications</u>					
10.4.1	Burglar guards	m <sup>2</sup>	2		R	-
10.4.2	Steel posts	m <sup>2</sup>	1		R	-
10.4.3	On doors	m <sup>2</sup>	9		R	-
10,5	<b>ON WOOD</b>					
	<u>Two coats polyurethane varnish</u>					
10.5.1	On doors.	m <sup>2</sup>	21		R	-
10.5.2	On door frames.	m <sup>2</sup>	11		R	-
11	<b>PROVISIONAL SUMS</b>					
11,1	<b>BUDGETARY ALLOWANCES</b>					
11.1.1	Provide a Provisional Sum amount of R 50 000,00 (Fifty Thousand Rands) for the refurbishment works (Used at the Project Manager's instruction).	Sum	1	R 50 000,00	R	50 000,00
<b>TOTAL excl. VAT- Carried forward to FINAL SUMMARY</b>					<b>R</b>	<b>50 000,00</b>

## LESEDING 400/132kV 500MVA TRANSFORMER 3 CIVIL WORKS

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
<b>SECTION 3: SUPPLY AND DELIVERY OF MATERIALS</b>					
<b>BILL NO. 1</b>					
<b>SUPPLY AND DELIVERY OF MATERIALS</b>					
<b>Note: It is the contractor's responsibility to verify all quantities from the issued drawings and through physical site measurements prior to placing any material or equipment orders</b>					
<b>A</b>	<b>SUPPLY AND DELIVERY OF CABLES</b>				<b>R -</b>
1	BVX2ECV	m	720		R -
2	BVX4ECV	m	1200		R -
3	BVX4DCV	m	1640		R -
4	BVX4QCV	m	90		R -
5	BVX4HCV	m	170		R -
6	BVX4LCV	m	50		R -
7	BVX7DCV	m	260		R -
8	BVX12DCV	m	2150		R -
9	BVX12ECV	m	330		R -
10	BVX19DCV	m	330		R -
11	BVX37DCV	m	390		R -
12	TPH10AX	m	90		R -
13	12MMHDD	m	1740		R -
<b>B</b>	<b>SUPPLY AND DELIVERY OF CONDUCTORS</b>				<b>R -</b>
1	Bull - AAC 61/4,26 mm AL (38,3 mm Dia)	m	1625		R -
2	Centipede - AAC 37/3,78 mm AL (26,5 mm Dia)	m	502		R -
3	Hare - COND,ACSR HARE 14.16D UNGRS D3136	m	480		R -
4	Insulated Centipede - 37/3,78 mm AL (36 mm O/D)	m	35		R -
5	Insulated Hornet - 19/3,25 mm AL (29 mm O/D)	m	10		R -
<b>C</b>	<b>SUPPLY AND DELIVERY OF CLAMPS</b>				<b>R -</b>
<b>EX CLAMPS</b>					
1	EX-A	No.	3		R -
2	EX-B	No.	3		R -
3	EX-D	No.	7		R -
<b>EXC CLAMPS</b>					
4	EXC-A	No.	3		R -
<b>ETC CLAMPS</b>					
5	ETC-J	No.	15		R -
6	ETC-K	No.	24		R -

	<b>EYC CLAMPS</b>					
7	EYC-B	No.	3		R	-
8	EYC-D	No.	6		R	-
9	EYC-H	No.	18		R	-
10	EYC-L	No.	6		R	-
11	EYC-R	No.	22		R	-
12	EYC-S	No.	53		R	-
13	EYC-T	No.	7		R	-
	<b>SUPPORT CLAMPS</b>					
14	EXCP2-D	No.	26		R	-
	<b>ACRYLIC CLAMPS</b>					
15	ACC 1	No.	3		R	-
16	ACC 3	No.	6		R	-
17	ACC 6	No.	3		R	-
	<b>CORONA RING</b>					
18	EUC	No.	2		R	-
19	ECRST-LH	No.	3		R	-
20	ECRST-RH	No.	3		R	-
	<b>SPACERS</b>					
21	ES-B	No.	202		R	-
<b>D</b>	<b>SUPPLY AND DELIVERY OF LABELS</b>				<b>R</b>	<b>-</b>
1	Yard labels including steelwork and necessary accessories.	No.	30		R	-
2	Phase discs (per set).	No.	12		R	-
<b>TOTAL excl. VAT- Carried forward to FINAL SUMMARY</b>						<b>R -</b>

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT	
	<b>SECTION 3: SUPPLY AND DELIVERY OF MATERIALS</b> <b>BILL NO. 2</b> <b>SUPPLY AND DELIVERY OF MATERIALS</b> Note: It is the contractor's responsibility to verify all quantities from the issued drawings and through physical site measurements prior to placing any material or equipment orders					
<b>A</b>	<b>SUPPLY AND DELIVERY OF BUSBAR TUBES</b>				<b>R</b>	<b>-</b>
1	200 Dia x 6 WT Busbar Tubes in lengths of 200mm	No	6		R -	
2	12000mm	No	30		R -	
<b>B</b>	<b>SUPPLY AND DELIVERY OF TUBULAR CLAMPS</b>				<b>R</b>	<b>-</b>
	<b>CLAMPS</b>					
1	EEC-PI-FS-P	No.	30		R -	
2	ETP-IL2-AB	No.	6		R -	
3	ETP-TW2-AB	No.	3		R -	
4	ETP-TW2-AE	No.	3		R -	
	<b>END CAPS</b>					
5	ETEC-CF-F (RED)	No.	4		R -	
6	ETEC-CF-F (WHITE)	No.	4		R -	
7	ETEC-CF-F (BLUE)	No.	4		R -	
8	ETEC-PL-F	No.	6		R -	
	<b>END CAPS WITH CLAMPS</b>					
9	ETEC-DC-F (RED)	No.	20		R -	
10	ETEC-DC-F (WHITE)	No.	20		R -	
11	ETEC-DC-F (BLUE)	No.	20		R -	
<b>C</b>	<b>SUPPLY AND DELIVERY OF DAMPING CONDUCTOR</b>				<b>R</b>	<b>-</b>
1	(Centipede) 1 x 400mm <sup>2</sup> conductor .	m	480		R -	
<b>TOTAL excl. VAT- Carried forward to FINAL SUMMARY</b>					<b>R</b>	<b>-</b>

## LESEDING 400/132kV 500MVA TRANSFORMER 3 CIVIL WORKS

Note: All cells locked - data to be entered into the rate column only.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	<b>SECTION 4: PROJECT STABILITY</b> <b>BILL NO. 1</b> <b>PROJECT STABILITY</b> <b>Refer to the Preambles for payment of Stakeholder Management Engagements</b>				
1	Allow a budgetary allowance <b>R760 000.00</b> (Seven Hundred and Sixty Thousand Rands) for Project Stability.	Sum	1	R 760 000,00	R 760 000,00
<b>TOTAL excl. VAT- Carried forward to FINAL SUMMARY</b>					<b>R 760 000,00</b>

Note: All cells locked

BILL NO.	DESCRIPTION	AMOUNT
<b>A</b>	<b>SECTION 1: GENERAL</b>	<b>R -</b>
1	PELIMINARIES AND GENERAL	R -
<b>B</b>	<b>SECTION 2: CIVIL WORKS</b>	<b>R 1 200 000,00</b>
1	DEMOLITIONS	R -
2	BULK EARTHWORKS	R 450 000,00
3	ACCESS AND TERRACE ROAD	R -
4	BASE FOUNDATIONS	R -
5	MICROPILING	R 600 000,00
6	DRAINAGE	R 100 000,00
7	FIRE PROTECTION - OIL DAM	R -
8	SUPPORT STEELWORK	R -
9	TRANSFORMER PLINTH	R -
10	CABLE TRENCHES, DUCTS & RAMPS	R -
11	YARDWORKS	R -
12	LIGHT MASTS	R -
13	FENCING	R -
14	OUTER CONCRETE FENCE	R -
15	ACCESS CONTROL BUILDING	R -
16	CONTROL BUILDING	R 50 000,00
<b>C</b>	<b>SECTION 3: SUPPLY OF MATERIALS</b>	<b>R -</b>
1	CONDUCTORS, CLAMPS AND CABLES	R -
2	BUSBAR TUBES	R -
<b>D</b>	<b>SECTION 4: PROJECT STABILITY</b>	<b>R 760 000,00</b>
1	PROJECT STABILITY	R 760 000,00
	<b>SUB-TOTAL (EXCLUDING VAT)</b>	<b>R 1 960 000,00</b>

1	CSDG (0.25% FACTOR)	R 4 900,00
<b>TOTAL CARRIED TO FORM OF OFFER (EXCLUDING VAT)</b>		R 1 964 900,00