

COPPER EARTHING CABLES REPLACEMENT WITH ALTERNATIVE CABLES AT KUSILE POWER STATION FOR A PERIOD OF 4 MONTHS

PART 2: PRICING DATA
ECC3 Option B

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C2.1 Pricing assumptions: Option B

1. How work is priced and assessed for payment

Clause 11 in NEC3 Engineering and Construction Contract (ECC3) Option B states:

Identified and defined terms	11 11.2	(21) The Bill of Quantities is the <i>bill of quantities</i> as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.
		(28) The Price for Work Done to Date is the total of <ul style="list-style-type: none"> the quantity of the work which the <i>Contractor</i> has completed for each item in the Bill of Quantities multiplied by the rate and a proportion of each lump sum which is the proportion of the work covered by the item which the <i>Contractor</i> has completed. Completed work is work without Defects which would either delay or be covered by immediately following work.
		(31) The Prices are the lump sums and the amounts obtained by multiplying the rates by the quantities for the items in the Bill of Quantities.

This confirms that Option B is a re-measurement contract and the bill comprises only items measured using quantities and rates or stated as lump sums. Value related items are not used. Time related items are items measured using rates where the rate is a unit of time.

2. Function of the Bill of Quantities

Clause 55.1 in Option B states, "Information in the Bill of Quantities is not Works Information or Site Information". This confirms that specifications and descriptions of the work or any constraints on how it is to be done are not included in the Bill, but in the Works Information. This is further confirmed by Clause 20.1 which states, "The *Contractor* Provides the Works in accordance with the Works Information". Hence the *Contractor* does **not** Provide the Works in accordance with the Bill of Quantities. The Bill of Quantities is only a pricing document.

3. Guidance before pricing and measuring

Employers preparing tenders or contract documents, and tendering contractors are advised to consult the sections dealing with the bill of quantities in the NEC3 Engineering and Construction Contract Guidance Notes before preparing the *bill of quantities* or before entering rates and lump sums into the *bill*.

There is no general provision in Option B for payment for materials on Site before incorporation into the *works*. If secondary Option X14 Advanced payment has not been used then the tendering contractor may obtain the same effect by inserting appropriate items in the method related charges where the *method of measurement* allows, or alternatively making allowance in the rates of the *bill of quantities* for the financing of Plant and Materials until they are incorporated in the *works*.

When compensation events arise, the default position is that the Bill of Quantities is not used to calculate the cost effect of the event. Defined Cost and the resulting Fee is used and Defined Cost includes all components of cost which the *Contractor* is likely to incur, including so called P & G items. Rates and

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lump sums from the Bill of Quantities, or from any other source, may be used instead of Defined Cost and the Fee only if the *Contractor* and *Project Manager* agree. If they are unable to agree, then Defined Cost plus Fee is used.

4. Measurement and payment

4.1. Symbols

The units of measurement described in the Bill of Quantities are metric units abbreviated as follows:

Abbreviation	Unit
%	percent
h	hour
ha	hectare
kg	kilogram
kl	kilolitre
km	kilometre
km-pass	kilometre-pass
kPa	kilopascal
kW	kilowatt
l	litre
m	metre
mm	millimetre
m ²	square metre
m ² -pass	square metre pass
m ³	cubic metre
m ³ -km	cubic metre-kilometre
MN	meganewton
MN.m	meganewton-metre
MPa	megapascal
No.	number
sum	Lump sum
t	tonne (1000kg)

4.2. General assumptions

- 4.2.1. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.
- 4.2.2. The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the *Contractor* in carrying out or providing that item.
- 4.2.3. An item against which no Price is entered will be treated as covered by other Prices or rates in the *bill of quantities*.
- 4.2.4. The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. The quantities of work assessed and certified for payment by the *Project Manager* at each assessment date will be used for determining payments due.

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- 4.2.5. The short descriptions of the items of payment given in the *bill of quantities* are only for the purposes of identifying the items. Detail regarding the extent of the work entailed under each item is provided in the Works Information.

4.3. Departures from the *method of measurement*

4.3.1.

4.4. Amplification of or assumptions about measurement items

The following is provided to assist in the interpretation of descriptions given in the *method of measurement*. In the event of any ambiguity or inconsistency between the statements in the *method of measurement* and this section, the interpretation given in this section shall be used.

C2.2 the *bill of quantities*

Item nr	Description	Unit	Quantity	Duration	Rate	Amount
ITEM NO	DESCRIPTION					
	ITEM 1					
1	PRELIMINARIES AND GENERAL					
A	Fixed					
1.1	Site Establishment for: Delivery of Office Converted Container	Once Off	1			
1.2	Site Establishment for: Delivery of Kitchen Converted Container	Once Off	1			
1.3	Site Establishment for: Delivery of Steel Storage Container	Once Off	1			
1.4	Site De-Establishment for: Collection of Office Converted Container	Once Off	1			
1.5	Site De-Establishment for: Collection of Kitchen Converted Container	Once Off	1			
1.6	Site De-Establishment for: Collection of Steel Storage Container	Once Off	1			
1.7	Medicals - Entry	Once Off	7			

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1.8	Medicals - Exit	Once Off	7			
1.9	Safety File	Once Off	1			
1.10	Normal PPE	Once Off	7			
1.11	Security Clearance Certification (Obtained from SAPS, MIE or Accredited Institution)	Once Off	7			
1.12	Delivery of Portable Flushable Toilet	Once Off	1			
1.13	Collection of Portable Flushable Toilet	Once Off	1			
1.14	Delivery of 16m Boom Lift	Once Off	1			
1.15	Collection of 16m Boom Lift	Once Off	1			
B	Time Related	Monthly	2	4		
1.1	Rental of 4x2 Light Driven Vehicle					
1.2	Rental of Office Converted Container	Monthly	1	4		
1.3	Rental of Kitchen Converted Container	Monthly	1	4		
1.4	Rental of Storage Container	Monthly	1	4		
1.5	Rental of Portable Flushable Toilet with handwash basin (To be serviced once a week)	Monthly	1	4		
1.6	Rental of 16m Boom Lift	Monthly	1	4		

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	ITEM 2					
2	Resources					
2.1	Electrical Engineer (1 -5 Years Experience)	Hours/Month	1	325		
2.2	Safety Officer (1 -5 Years Experience)	Hours/Month	1	651		
2.3	Risk Assessor (1 -5 Years Experience)	Hours/Month	1	651		
2.4	Electrician (Most Experience Artisan)	Hours/Month	2	651		
2.5	Assistant Electrician (Semi Skilled)	Hours/Month	2	651		
	ITEM 3					
3	Supply, Delivery and Installation of Material					
	Installed in the Plant					
3.1	6mm2 Insulated Copper Cable Anti-theft (Kwena) Cable	m	500			
3.2	16mm2 Insulated Copper Cable Anti-theft (Kwena) Cable	m	500			
3.3	25mm2 Insulated Copper Cable Anti-theft (Kwena) Cable	m	500			
3.4	35mm2 Insulated Copper Cable Anti-theft (Kwena) Cable	m	500			

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3.5	70mm ² Insulated Copper Cable Anti-theft (Kwena) Cable	m	5000			
3.6	6mm ² Copper Lugs Copper Tin Plated Lugs	No	500			
3.7	16mm ² Insulated Copper Cable Copper Tin Plated Lugs	No	500			
3.8	25mm ² Copper Lugs Copper Tin Plated Lugs	No	500			
3.9	35mm ² Insulated Copper Cable Copper Tin Plated Lugs	No	500			
3.10	70mm ² Copper Lugs Copper Tin Plated Lugs	No	800			
3.11	100 x 3mm Copper Strip Aluminium Strip	m	500			
3.12	50 x 6mm Copper Bar Aluminium Strip	m	500			
3.13	Copper C-Clamps Tin Plated C-Clamps	No	500			
3.14	10mm Ø Black Annealed Copper 13.5mm Aluminium	m	500			
	TOTAL					