

DEPARTMENT OF

PUBLIC WORKS, ROADS & INFRASTRUCTURE

BID NUMBER: LDPWRI-B/20346

CONSTRUCTION OF NEW LIMPOPO PROVINCIAL THEATRE AT **BAKONE-MALAPA IN CAPRICORN DISTRICT**

For the

DEPARTMENT OF SPORTS, ART AND CULTURE (DSAC) LIMPOPO PROVINCE

VOLUME 2 of 3: PRICING DATA (CONTRACTOR TO RETURN)

Issued by:

Limpopo Department of Public Works, Roads and InfrastructureWorks Towers Building 43 Church Street Polokwane 0700

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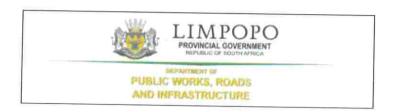
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Name of the Bidder :....



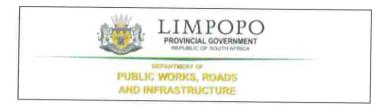
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CONSTRUCTION OF NEW LIMPOPO PROVINCIAL THEATRE AT BAKONE MALAPA, POLOKWANE IN CAPRICORN DISTRICT - LDPWRI-B/20346



PART C2: PRICING DATA

Bidder's initials

PART C2.1: PRICING INSTRUCTIONS

- The Bills of Quantities have been drawn up in accordance with the Standard System of Measuring Building Work in accordance with the provisions of the Model Bills of Quantities or Electrical Work, published by the South African Association of Quantity Surveyors, (July, 2005).
- The agreement is under the JBCC N/S Subcontractor Agreement for use with the JBCC PBA (Edition 4.1 code 2101 March 2005) form of contract with Preliminaries (Code 2103 May 2005) incorporating the State Provisions of cl 41.0.
- It will be assumed that prices included in the Bills of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders.
- The prices and rates in these Bills of Quantities are fully inclusive prices for the work described under the items. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. These prices will be used as a basis for assessment of payment for additional work that may have to be carried out.
- An item against which no price is entered will be considered to be covered by the other prices or rates in the Bills of Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes.
- The Contract Data and the standard form of contract referenced therein must be studied for the full extent and meaning of each and every clause set out in Section 1 (Preliminaries) of the Bills of Quantities.
- The Bills of Quantities is not intended for the ordering of materials. Any ordering of materials, based on the Bills of Quantities, is at the Contractor's risk.
- The shall set a minimum of 5 % of the project value for sub-contractor determine the amount to be paid for the Contract Participation Goal (CPG).

Bidder's initials	

CONSTRUCTION OF NEW LIMPOPO PROVINCIAL THEATRE AT BAKONE MALAPA, POLOKWANE IN CAPRICORN DISTRICT - LDPWRI-B/20346

Pricing Assumptions:

Provides the criteria and assumptions which it will be assumed (in the contract) that the tenderer has taken into account when developing his/her prices.

- The Employer shall determine the amount to be paid for the Contract Participation Goal (CPG) on the contract and this amount shall be stated under the section Enterprise Development as a **Provisional Sum** in the Preliminaries and Generals (P&Gs).

CONTRACT PARTICIPATION GOAL (CPG)

The rates given in **Table 1.** are the recommended rates to guide the Employer to determine the amount for Enterprise Development per targeted enterprise. The Employer may adjust these rates which may be affected by factors such as location of the project. The Employer must include this amount as a **Provisional Sum** in the Preliminary and General (P&G) section as illustrated in **Table 1. Note: This item should not be a determinant in the competitiveness of the bid.**

Preliminary and General (Extract Indicating Provisional Sum from P&Gs)

Table 1. Breakdown of the items per Targeted Enterprise to be included in the tender data

Item	Description	Unit	Rate	Quantity	Amount (R)
15	Health and Safety				
16	Enterprise Development	and distanced in construction () is in the interior to be the annual in contrast of the interior in the interior of the inter	deri ekonisi isaristi misusi masiste. 122, 144 p	diodaddinas amateidadaininis si	Kindinamatatainimmittaaniis inoskoimitsimuusis
16.1	Enterprise Development of Targeted Enterprise or JV partners				
16.1.1	Needs Analysis and Enterprise Development Plan per Targeted Enterprise (at a rate of R5000 per enterprise for 5 enterprises)	ltem.	5000	5	25000
16.1.2	Monitoring and Interim reporting per targeted enterprise (at a rate of R20,000.00 per quarter over 4 quarters)	Item.	20000	4	80000
16.1.3	Project Completion report per Targeted Enterprise(at a rate of R5000 per enterprise for 5 enterprises)	Item.	5000	5	25000

Item 16.1.1 refers to the Needs Analysis the contractor shall perform on the targeted enterprise and / or JV partner to identify the developmental goals at a rate of R5000.00 (five thousand Rands) per targeted enterprise.

Item 16.1.2 refers to the Monitoring and Interim reporting to be performed by the contractor as per the Standard at a rate of R20 000.00 (twenty thousand Rands) per quarter.

Item 16.1.3 refers to the Completion report, the contractor shall submit the Completion report to the Employer's representative as per the Standard at a rate of R5000.00 (five thousand Rands) per targeted enterprise.

The contractor shall be paid as follows:

- 1. Needs analysis and enterprise development plan per Targeted Enterprise
- 2. Mentoring and interim reporting per Targeted Enterprise; and
- 3. Project completion report per Targeted Enterprise.

Bidder's	initials		

PART C2.2: BILLS OF QUANTITIES

Bidder's initials

LIMPOPO DEPARTMENT OF PUBLIC WORKS, ROADS AND INFRASTRUCTURE

CONSTRUCTION OF NEW LIMPOPO PROVINCIAL THEATRE

AT BAKONE MALAPA POLOKWANE

TENDER DOCUMENTS

BILLS OF QUANTITIES





August 2023

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SECTION NO. 1 PRELIMINARIES

	1		Amount
	SECTION NO. 1		
	PRELIMINARIES (CRAD MODIF CROUD NO 100 NO 1		
	(CPAP WORK GROUP NO. 190 UNLESS OTHERWISE STATED)		
	PRICING OF PRELIMINARIES		
	Should Option A, as set out in clause B10.3.1 hereinafter be used for the adjustment of preliminaries then each item priced is to be allocated to one or more of the three categories Fixed, Value Related or Time Related and the respective amounts entered into the spaces provided under each item		
	Items not priced in these Preliminaries shall be deemed to be included elsewhere in these bills of quantities		
	SECTION A: JBCC PRINCIPAL BUILDING AGREEMENT	:	
	DEFINITIONS		
	A1.0 DEFINITIONS AND INTERPRETATION		
	Clause 1.0		
	Clause 1.1 Definition of "Commencement Date" is added:		j
	"COMMENCEMENT DATE" means the date that the agreement, made in terms of the Form of Offer and Acceptance, comes into effect		
1	Clause 1.1 Definition of "Construction Guarantee" is amended by replacing it with the following:	İtem	
	F: V: T:	Item	
	"CONSTRUCTION GUARANTEE" means a guarantee at call obtained by the contractor from an institution approved by the employer in terms of the employer's construction guarantee form as selected in the schedule		
	Clause 1.1 Definition of "Construction Period" is amended by replacing it with the following:		
	"CONSTRUCTION PERIOD" means the period commencing on the commencement date and ending on the date of practical completion		
	Clause 1.1 Definition of "Corrupt Practice" is added:		
	"CORRUPT PRACTICE" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution		
İ	Clause 1.1 Definition of "Fraudulent Practice" is added:		
	"FRAUDULENT PRACTICE" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any tenderer and includes collusive practice among tenderers (prior to or after the tender submission) designed to establish tender prices at artificial non–competitive levels and to deprive the tenderer of the benefits of free and open competition		
	Clause 1.1 Definition of "Interest" is amended by replacing it with the following:		
	Carried To Section Summary	R	
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	Preliminaries		

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"INTEREST" means the interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999)			
Clause 1.1 Definition of "Principal Agent" is amended by replacing it with the following:			
"PRINCIPAL AGENT" means the person or entity appointed by the employer and named in the schedule. In the event of a principal agent not being appointed, then all the duties and obligations of a principal agent as detailed in the agreement shall be fulfilled by a representative of the employer as named in the schedule			
Clause 1.1 Definition of "Security" is amended by replacing it with the following:		•	
"SECURITY" means the form of security provided by the employer or contractor, as stated in the schedule, from which the contractor or employer may recover expense or loss		ş	
Clause 1.6 is amended by replacing the words "prepaid registered post, telefax or email" with "prepaid registered post or telefax"			
Clause 1.6.4 is amended by replacing it with the following:			
No clause			
Fixed:Time related:Time related:	ı		
	Item		
F: V: T:			
OBJECTIVE AND PREPARATION			
A2.0 OFFER, ACCEPTANCE AND PERFORMANCE			
Clause 2.0	Item		
F:			
Clause 3.0			
Clause 3.2.1 is amended by replacing 14.1" with 14.0"			
Clause 3.7 is amended by the addition of the following:			
The contractor shall supply and keep a copy of the JBCC Series 2000 Principal Building Agreement and Preliminaries applicable to this contract on the site, to which the employer, principal agent and agents shall have access at all times			
Clause 3.10 is amended by replacing the second reference to "principal agent" with the word "employer"	ltem		
F: V: T:			
Clause 4.0			
Clause 4.3 is amended by replacing it with the following:			
			
Carried To Section Summary	R		
Section No. 1			
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Preliminaries 3			
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	No clause			
	A5.0 EMPLOYER'S AGENTS			
5	Clause 5.0			
	Clause 5.1.2 is amended to include clauses 32.6.3, 34.3, 34.4 and 38.5.8	Item		
	F:			
6	Clause 6.0	ltem		
	F: V: T:	:		
7	Clause 7.0		:	
	Note: A separate clause has been included in Section C: Specific Preliminaries of the bills of quantities / lump sum document for the contractor to have the opportunity to price for all the requirements of the Occupational Health and Safety Act, Construction Regulations and Health and Safety specification	ltem		
	F: V: T:			:
8	Clause 8.0	Item		
	F: V: T:			
9	Clause 9.0	Item		
	F: V: T:			
	Clause 10.0			
10	Clause 10.0 is amended by the addition of the following clauses:	Item		
	F:			
	(a) Without in any way limiting the contractor's obligations in terms of the contract, the contractor shall bear the full risk of damage to or destruction of the works by whatever cause during construction of the works and hereby indemnifies and holds harmless the employer against any such damage. The contractor shall take such precautions and security measures and other steps for the protection and security of the works as the contractor may deem necessary			
	(b) The contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace or repair the works			
	(c) The employer shall carry the risk of damage to or destruction of the works and materials paid for by the employer that is the result of the excepted risks as set out in 10.6			
	Carried To Section Summary	R		
	Section No. 1 Bill No. 1 Preliminaries			
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11	(d) Where the employer bears the risk in terms of this contract, the contractor shall, if requested to do so, reinstate any damage or destroyed portions of the works and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof	ltem	
	F: V: T:		
	10.6 Injury to Persons or loss of or damage to Properties		
	(a) The contractor shall be liable for and hereby indemnifies the employer against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the works unless due to any act or negligence of any person for whose actions the employer is legally liable		
	(b) The contractor shall be liable for and hereby indemnifies the employer against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the site, whether belonging to or under the control of the employer or any other body or person, arising out of or in the course of or by reason of the execution of the works unless due to any act or negligence of any person for whose actions the employer is legally liable		
	(c) The contractor shall, upon receiving a contract instruction from the principal agent, cause the same to be made good in a perfect and workmanlike manner at his own cost and in default thereof the employer shall be entitled to cause it to be made good and to recover the cost thereof from the contractor or to deduct the same from amounts due to the contractor		
	(d) The contractor shall be responsible for the protection and safety of such portions of the premises placed under his control by the employer for the purpose of executing the works until the issue of the certificate of practical completion		
	(e) Where the execution of the works involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the contractor shall obtain adequate insurance and will remain adequately insured or insured to the specific limit stated in the contract against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the works has been completed		
12	(f) The contractor shall at all times proceed immediately at his own cost to remove or dispose of any debris and to rebuild, restore, replace or repair such property and to execute the works	Item	
	F:		
	Carried To Section Summary	R	
	Section No. 1	" -	
	Bill No. 1		
	Preliminaries		
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	10.7 High risk insurance			
13	In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply:	Item		
	F: V: T:			
	The contractor shall, from the commencement date of the works until the date of the certificate of practical completion bear the full risk of and hereby indemnifies and holds harmless the employer against any damage to or destruction of the works consequent upon a catastrophic ground movement as mentioned above. The contractor shall take such precautions and security measures and other steps for the protection of the works as he may deem necessary			
14	When so instructed to do so by the principal agent, the contractor shall proceed immediately to remove or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace or repair the works, at the contractor's own costs	ltem		
	F: V: T:	1	·	
i	10.7.2 Injury to persons or loss of or damage to property			
	The contractor shall be liable for and hereby indemnifies and holds harmless the employer against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of, or caused by a catastrophic ground movement as mentioned above			
	The contractor shall be liable for and hereby indemnifies the employer against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the site, whether belonging to or under the control of the employer or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of the contract			
	10.7.3 It is the responsibility of the contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.7.1 and 10.7.2. Without limiting the contractor's obligations in terms of the contract, the contractor shall, within twenty—one (21) calendar days of the commencement date but before commencement of the works, submit to the employer proof of such insurance policy, if requested to do so			
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	Comind To Continue Comment	r		
	Carried To Section Summary Section No. 1	R		
	Bill No. 1			
	Preliminaries			

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15	10.7.4 The employer shall be entitled to recover any and all losses or damages of whatever nature suffered or incurred consequent upon the contractor's default of his obligations as set out in 10.7.1; 10.7.2 and 10.7.3. Such losses or damages may be recovered from the contractor or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the employer and the contractor and for this purpose all these contracts shall be considered one indivisible whole	ltem		
	F: V: T:			
	A11.0 LIABILITY INSURANCES			
16	Clause 11.0	ltem	1	
	F: V: T:		<u> </u>	
	A12.0 EFFECTING INSURANCES			
17	Clause 12.0	ltem		
	F:	_		
18	A13.0 No clause	ltem		
	F:			
	Clause 14.0			
ĺ	Clauses 14.1 – 14.8 are amended by replacing them with the following:			
į	14.1 In respect of contracts with a contract sum up to R1 million, the security to be provided by the contractor to the employer will be a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT)			
İ	14.1.1 The payment reduction of the value certified in a payment certificate shall be mutatis mutandi in terms of $31.8(A)$			
	14.1.2 The employer shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the employer complies with the provisions of 33.4 in which event the employer's entitlement shall take precedence over his obligations to refund the payment reduction security or portions thereof to the contractor			
	14.2 In respect of contracts with a contract sum above R1 million, the contractor shall have the right to select the security to be provided in terms of 14.3, 14.4, 14.5, 14.6, or 14.7 as stated in the schedule. Such security shall be provided to the employer within twenty—one (21) calendar days from commencement date. Should the contractor fail to select the security to be provided or should the contractor fail to provide the employer with the selected security within twenty—one (21) calendar days from commencement date, the security in terms of 14.7 shall be deemed to have been selected			
	14.3 Where security as a cash deposit of ten per cent (10%) of the contract sum (excluding VAT) has been selected:			
	Carried To Section Summary	R		
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14.3.1 The contractor shall furnish the employer with a cash deposit equal in value to ten per cent (10%) of the contract sum (excluding VAT) within twenty-one (21) calendar days from commencement date			
14.3.2 Within twenty—one (21) calendar days of the date of practical completion of the works the employer shall reduce the cash deposit to an amount equal to three per cent (3%) of the contract value (excluding VAT), and refund the balance to the contractor			
14.3.3 Within twenty-one (21) calendar days of the date of final completion of the works the employer shall reduce the cash deposit to an amount equal to one per cent (1%) of the contract value (excluding VAT) and refund the balance to the contractor			
14.3.4 On the date of payment of the amount in the final payment certificate, the employer shall refund the remainder of the cash deposit to the contractor			
14.3.5 The employer shall be entitled to recover expense and loss from the cash deposit in terms of 33.0 provided that the employer complies with the provisions of 33.4 in which event the employer's entitlement shall take precedence over his obligations to refund the cash deposit security or portions thereof to the contractor			
14.3.6 The parties expressly agree that neither the employer nor the contractor shall be entitled to cede the rights to the deposit to any third party			
14.4 Where security as a variable construction guarantee of ten percent (10%) of the contract sum (excluding VAT) has been selected:			
14.4.1 The contractor shall furnish the employer with an acceptable variable construction guarantee equal in value to ten per cent (10%) of the contract sum (excluding VAT) within twenty-one (21) calendar days from commencement date			
14.4.2 The variable construction guarantee shall reduce and expire in terms of the Variable Construction Guarantee form included in the invitation to tender			
14.4.3 The employer shall return the variable construction guarantee to the contractor within fourteen (14) calendar days of it expiring			
14.4.4 Where the employer has a right of recovery against the contractor in terms of 33.0, the employer shall issue a written demand in terms of the variable construction guarantee			
14.5 Where security as a fixed construction guarantee of five per cent (5%) of the contract sum (excluding VAT) and a five per cent (5%) payment reduction of the value certified in the payment certificate (excluding VAT) has been selected:			
14.5.1 The contractor shall furnish a fixed construction guarantee to the employer equal in value to five per cent (5%) of the contract sum (excluding VAT)			
14.5.2 The fixed construction guarantee shall come into force on the date of issue and shall expire on the date of the last certificate of practical completion			
14.5.3 The employer shall return the fixed construction guarantee to the contractor within fourteen (14) calendar days of it expiring			
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Section No. 1			
Bill No. 1			
Preliminaries		ıl	

			Amount
	14.5.4 The payment reduction of the value certified in a payment certificate shall be in terms of 31.8 (A) and 34.8		
	14.5.5 Where the employer has a right of recovery against the contractor in terms of 33.0, the employer shall be entitled to issue a written demand in terms of the fixed construction guarantee or may recover from the payment reduction or may do both		
	14.6 Where security as a cash deposit of five per cent (5%) of the contract sum (excluding VAT) and a payment reduction of five per cent (5%) of the value certified in the payment certificate (excluding VAT) has been selected:		
	14.6.1 The contractor shall furnish the employer with a cash deposit equal in value to five per cent (5%) of the contract sum (excluding VAT) within twenty-one (21) calendar days from commencement date		
	14.6.2 Within twenty-one (21) calendar days of the date of practical completion of the works the employer shall refund the cash deposit in total to the contractor		
	14.6.3 The payment reduction of the value certified in a payment certificate shall be mutatis mutandi in terms of 31.8(A)		
	14.6.4 Where the employer has a right of recovery against the contractor in terms of 33.0, the employer may issue a written notice in terms of 33.4 or may recover from the payment reduction or may do both		
	14.7 Where security as a payment reduction of ten per cent (10%) of the value certified in the payment certificate (excluding VAT) has been selected:		
	14.7.1 The payment reduction of the value certified in a payment certificate shall be mutatis mutandi in terms of 31.8(B)		
	14.7.2 The employer shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the employer complies with the provisions of 33.4 in which event the employer's entitlement shall take precedence over his obligations to refund the payment reduction or portions thereof to the contractor		
1	14.8 Payments made by the guarantor to the employer in terms of the fixed or variable construction guarantee shall not prejudice the rights of the employer or contractor in terms of this agreement		
19	14.9 Should the contractor fail to furnish the security in terms of 14.2, the employer, in his sole discretion and without notification to the contractor, is entitled to change the contractor's selected form of security to that of a ten per cent (10%) payment reduction of the value certified in the payment certificate (excluding VAT), whereafter 14.7 shall be applicable	ltem	
	F: V: T:		
	EXECUTION		
	A15.0 PREPARATION FOR AND EXECUTION OF THE WORKS		
	Clause 15.0		
	Clause 15.1.1 is amended by replacing it with:		
	Carried To Section Summary	R	
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	No clause			
	Clause 15.1.2 is amended by replacing it with:			
	The security selected in terms of 14.0			
	Clause 15.1 is amended by the addition of the following clause:			
	15.1.4 An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), within twenty-one (21) calendar days of commencement date			
20	Clause 15.2.1 is amended by replacing it with the following clause:			
	Give the contractor possession of the site within ten (10) working days of the contractor complying with the terms of 15.1.4	ltem	,	
	F: V: T:			
	A16.0 ACCESS TO THE WORKS			
21	Clause 16.0	ltem		
	F:			
22	Clause 17.0			
	Clause 17.1.11 is amended by deleting the words "and the appointment of nominated and selected subcontractors"	ltem		
İ	F: V: T:			
	A18.0 SETTING OUT OF THE WORKS			
23	Clause 18.0	ltem		
	F:			
24	Clause 19.0	ltem		
	F: V: T:			
25	Clause 20.0			
	Clause 20.1.3 is amended by replacing it with the following:			
	No clause			
	Note: See item B9.1 hereinafter for adjustment of attendance on nominated subcontractors executing work allowed for under Provisional Sums	ltem		
	F: V: T:			
26	Clause 21.0			
	Clause 21 is amended by replacing it with:			
	Carried To Section Summary	R		
	Section No. 1			
	Bill No. 1			
	Preliminaries			

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	No clause	Item		
	F:			!
27	Clause 22.0	Item		
	F: V: T:			
	A23.0 CONTRACTOR'S DOMESTIC SUBCONTRACTORS			
28	Clause 23.0	Item		
	F:			
	A24.0 PRACTICAL COMPLETION			
29	Clause 24.0	Item		
	F:			
30	Clause 25.0	Item		
	F: V: T:			
	A26.0 FINAL COMPLETION			
31	Clause 26.0			
	Clause 26.1.2 is amended by inserting "#" next to 26.1.2	ltem		
	F:			
32	Clause 27.0	ltem		
	F: V: T:			
	A28.0 SECTIONAL COMPLETION		i	
33	Clause 28.0	ltem		
	F:			
34	Clause 29.0			
	Clause 29.2.5 is amended by replacing it with:			
	No clause	Item		
	F: V: T:			
	A30.0 PENALTY FOR NON-COMPLETION			
35	Clause 30.0	Item		
	F: V: T:			
	en en en en en en en en en en en en en e			
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PAYMENT			
A31.0 INTERIM PAYMENT TO THE CONTRACTOR			
Clause 31.0			
Clause 31.5.2 is amended by replacing "14.7.1" with "14.0"		i	
Clause 31.8 is amended by replacing it with the following two alternative clauses:			
Alternative A		ŀ	
31.8(A) Where a security is selected in terms of 14.1; 14.5 or 14.6, the value of the works in terms of 31.4.1 and materials and goods in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:			
31.8(A).1 Ninety-five per cent (95%) of such value in interim payment certificates issued up to the date of practical completion			
31.8(A).2 Ninety-seven per cent (97%) of such value in interim payment certificates issued on the date of practical completion and up to but excluding the date of final completion			
31.8(A).3 Ninety–nine per cent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 34.6			
31.8(A).4 One hundred per cent (100%) of such value in the final payment certificate in terms of 34.6 except where the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate			
Alternative B			
31.8(B) Where security as a payment reduction in terms of 14.7 has been selected, the value of the works in terms of 31.4.1 and materials and goods in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:			
31.8(B).1 Ninety per cent (90%) of such value in interim payment certificates issued up to the date of practical completion			
31.8(B).2 Ninety-seven per cent (97%) of such value in interim payment certificates issued on the date of practical completion and up to but excluding the date of final completion			
31.8(B).3 Ninety-nine per cent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 34.6			
31.8(B).4 One hundred per cent (100%) of such value in the final payment certificate in terms of 34.6 except where the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate		:	
Clause 31.12 is amended by deleting the following:			
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36	Payment shall be subject to the employer giving the contractor a tax invoice for the amount due	ltem		
	F: V: T:			
37	Clause 32.0			
	Clauses 32.5.1, 32.5.4 and 32.5.7 are amended by the addition of the following at the end of the sentence:			
	"due to no fault of the contractor"	ltem		
	F: V: T:			
38	Clause 33.0	ltem		
	F: V: T:			
	Clause 34.0			
	Clause 34.1 is amended by removing "#" next to 34.1			
	Clause 34.2 is amended by inserting "#" next to 34.2			
:	Clause 34.8 is amended by deleting the words "where security as a fixed construction guarantee in terms of 14.4 has been selected or where payment reduction has been applied in terms of 14.7.1"			
39	Clause 34.13 is amended by replacing "seven (7) calendar days" with "twenty-one (21) calendar days" and deleting the words "subject to the employer giving the contractor a tax invoice for the amount due"	ltem		
	F: V: T:			i
40	Clause 35.0	ltem		
	F: V: T:			
	A36.0 CANCELLATION BY EMPLOYER - CONTRACTOR'S DEFAULT			
41	Clause 36.0			
	Clause 36.1 is amended by the addition of the following clauses:			
	36.1.3 refuses or neglects to comply strictly with any of the conditions of contract			
	36.1.4 estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa			
	36.1.5 in the judgement of the employer, has engaged in corrupt or fraudulent practices in competing for or in executing the contract			
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	Clause 36.3 is amended by removing the reference to "No clause" and replacing the words "principal agent" with "employer"	ltem		
42	F:	ltem		
	F:			
	Clause 37.0			
	Clause 37.3.5 is amended by replacing "ninety (90)" with "one hundred and twenty (120)" $$		•	
43	37.5 Notwithstanding any clause to the contrary, on cancellation of this agreement either by the employer or the contractor; or for any reason whatsoever, the contractor shall on written instruction, discontinue with the works on a date stated and withdraw himself from the site. The contractor shall not be entitled to refuse to withdraw from the works on the grounds of any lien or right of retention or on the grounds of any other right whatsoever	ltem		
ļ	F: V: T:			
	Clause 38.0			
i	Clause 38.5.4 is amended by replacing "ninety (90)" with "one hundred and twenty (120)" $$			
	Clause 38.0 is amended by the addition of the following clause:			
44	38.7 Notwithstanding any clause to the contrary, on cancellation of this agreement either by the employer or the contractor; or for any reason whatsoever, the contractor shall on written instruction, discontinue with the works on a date stated and withdraw himself from the site. The contractor shall not be entitled to refuse to withdraw from the works on the grounds of any lien or right of retention or on the grounds of any other right whatsoever	ltem		
	F: V: T:			
ŀ	A39.0 CANCELLATION - CESSATION OF THE WORKS			
45	Clause 39.0			
	Clause 39.3.5 is amended by the addition of the following at the end of the sentence:			
	"within one hundred and twenty (120) working days of completion of such a	Item		
	F: V: T:			
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	<u>DISPUTE</u>			
	A40.0 DISPUTE SETTLEMENT			
	Clause 40.0			
	Clause 40.2.2 is amended by replacing "one (1) year" with "three (3) years"			
	Clause 40.6 is amended by removing the reference to: No clause			
46	Clause 40.7.1 is amended by replacing " (10) " with " (15) " and by the addition of the following:			
	Whether or not mediation resolves the dispute, the parties shall bear their own costs concerning the mediation and equally share the costs of the mediator and related costs	ltem		
	F:			
	A41.0 STATE CLAUSES			
47	Clause 41.0	ltem		
	F: V: T:			
	CONTRACT VARIABLES			
	A42.0 THE SCHEDULE (DPW-04EC)			
48	Clause 42.0			
	Tenderers are referred to the Contract Data DPW-04(EC) for variables pertaining to this contract	Item		
	F:			
	BILL NO. 2			!
	SECTION B: JBCC PRELIMINARIES			
	B1.0 DEFINITIONS AND INTERPRETATION			
	B1.1 Definitions and interpretation			
49	See also clause A1.0 of Section A for additional or amended definitions which shall apply equally to this Section	ltem		
	F: V: T:			
	B2.0 DOCUMENTS	i		
50	B2.1 Checking of documents	Item	į.	
	F:	Item		
51	B2.2 Provisional bills of quantities	Item	:	
	F: V: T:			
	Carried To Section Summary	R		
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52	B2.3 Availability of construction documentation	Îtem		
	F: V: T:			
53	B2.4 Interests of agents	Item		
	F: V: T:			
54	B2.5 Priced documents	Item		
55	F:			
	Clause 2.6 is amended by replacing "JBCC Form of Tender" with "Form of Offer and Acceptance)"	ltem		
İ	F: V: T:	i		
56	B3.1 Defined works area	Item	i i	
	F: V: T:			
57	B3.2 Geotechnical investigation	ltem		
58	F:V:	ltem		
	F: V: T:			
59	B3.4 Existing premises occupied	ltem		
	F: V: T:			
60	B3.5 Previous work – dimensional accuracy	Item		
61	F: V: T:	Item		
	F: V: T:	100111		
62	B3.7 Services – known	Item		
	F: V: T:			
63	B3.8 Services – unknown	ltem		
	F: V: T:			
64	B3.9 Protection of trees	ltem		
65	F: V: T:	Item		
0.5	F: V: T:	item	i	
66	B3.11 Inspection of adjoining properties	ltem		
	F: V: T:			
	B4.0 MANAGEMENT OF CONTRACT			
57	B4.1 Management of the works	ltem		
	F: V: T:			
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68	B4.2 Programme for the works	ltem		
	F: V: T:			
69	B4.3 Progress meetings	Item		
	F: V: T:	14		
70	B4.4 Technical meetings	ltem		
	F: V: T:			
71	B4.5 Labour and plant records	Item		
	F: V: T:			
	B5.0 SAMPLES, SHOP DRAWINGS AND MANUFACTURERS INSTRUCTIONS			
72	B5.1 Samples of materials	Item		
	F: V: T:			
73	B5.2 Workmanship samples	Item		
	F: V: T:			
74	B5.3 Shop drawings	Item		
	F: V: T:			l
75	B5.4 Compliance with manufacturers' instructions	ltem	•	
	F: V: T:			
	B6.0 TEMPORARY WORKS AND PLANT			
76	B6.1 Deposits and fees	Item		
	F: V: T:			
77	B6.2 Enclosure of the works	ltem		
	F: V: T:			
78	B6.3 Advertising	ltem		
	F: V: T:			
79	B6.4 Plant, equipment, sheds and offices	ltem		
	F: V: T:			
80	B6.5 Main notice board	ltem		
	F: V: T:			
81	B6.6 Subcontractors' notice board	Item		
	F: V: T:			
	B7.0 TEMPORARY SERVICES			
82	B7.1 Location	ltem		
	F: V: T:			
83	B7.2 Water	Item	•	
	F: V: T:			
84	B7.3 Electricity	Item		
	F:			
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85	B7.4 Telecommunication facilities	Item		
	F:			
86	B7.5 Ablution facilities	ltem		
	F: V: T:			
	B8.0 PRIME COST AMOUNTS			
87	B8.1 Responsibility for prime cost amounts	Item		
	F:			
	B9.0 ATTENDANCE ON N/S SUBCONTRACTORS			
88	B9.1 General attendance	Item		
89	F:	Item		
0.5	F: V: T:	i item		
90	B9.3 Commissioning – fuel, water and electricity	ltem		
	F: V: T:			
	B10.0 FINANCIAL ASPECTS			
91	B10.1 Statutory taxes, duties and levies	ltem		
	F: V: T:			
92	B10.2 Payment for preliminaries	ltem		
93	F: V: T:			
23	B10.3 Adjustment of preliminaries			
	Clauses B10.3.1 and B10.3.2 are amended by replacing "within fifteen (15) working days of taking possession of the site" with "when submitting his priced bills of			
	quantities / lump sum document"	Item		
	F: V: T:			
94	Should Option A, as set out in clause B10.3.1 hereinafter be used for the adjustment of preliminaries then each item priced is to be allocated to one or more			
	of the three categories Fixed, Value Related or Time Related and the respective			
Ì	amounts entered into the spaces provided under each item	ltem		
	F: V: T:			
95	B10.4 Payment certificate cash flow	ltem		
	F: V: T:			
0.5	B11.0 GENERAL			
96	B11.1 Protection of the works	ltem !		
97	F: V: T:	ltem		
-	F: V: T:	i ÇCIII		
98	B11.3 Security of the works	ltem	İ	
	F: V: T:			
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		I	Amount	
99	B11.4 Notice before covering work	ltem		
	F:			
1001	l B11.5 Disturbance	item		
•				
	F: V: T:			
1011	B11.6 Environmental disturbance	ltem		
j				
1021	F:		i	
1021	. B11.7 Works cleaning and clearing	ltem		
2				
103	F: V: T:	Item		
103	F: V: T:	item		
104	B11.9 Overhand work	ltem		
	F: V: T:			
1051 0	B11.10 Instruction manuals and guarantees	ltem		
5				
1001	F: V: T:			
1061	B11.11 As built information	Item		
6				
1071	F: B11.12 Tenant installations	ltem		
ф	DII.IZ Fellant installations	item		
7				
	F:			
108	B12.1 Schedule of variables	ltem		
	F: V: T:			
	This schedule contains all variables referred to in this document and is divided into pre-tender and post-tender categories.			
	The pre-tender category must be completed in full and included in the tender documents.			
	Both the pre-tender and post-tender categories form part of these Preliminaries			
	12.1 PRE-TENDER INFORMATION			
	12.1.1 Provisional bills of quantities			
	[2.2] The quantities are provisional No			
	12.1.2 Availability of construction documentation			
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[2.3] Construction documentation is complete NO

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12.1.3 Interests of agents

[2.4] Details: NIL

12.1.4 Defined works area

[3.1] Details:

The site is in Bakone Malapa, Polokwane, Capricorn District Municipality, Limpopo Province

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	13.1.5 Cooksobning investigation			
	12.1.5 Geotechnical investigation			
	[3.2] Details: Available on request from Consulting Engineers			
	12.1.6 Existing premises occupied			
i				
	[3.4] Specific requirements: Not applicable			
	12.1.7 Previous work - dimensional accuracy			
	[3.5] Details:			
	Building platforms, retaining walls and bulk infrastructure by others			
	12.1.8 Previous work - defects			
	[3.6] Details: As above item			
	12.1.9 Services - known			
	[3.7] Details:			
	Details available on request from Consulting engineers			
	12.1.10 Protection of trees			
	[3.9] Specific requirements: Not applicable			
İ	12.1.11 Inspection of adjoining properties			
	[3.11] Specific requirements:			
	Contractor to carry out their own inspection and report if they identify any concerns			
	12.1.12 Enclosure of the works		:	
	[6.2] Specific requirements:			
	12.1.13 Offices			
	[6.4.3] Specific requirements:			
	A contractors camp is to be created with the following temporary structures to be provided:			
	The contractor shall provide, maintain and remove on completion of the works offices as listed below and are to be suitably insulated, ventilated and airconditioned, provided with electric lighting and power socket outlets and fitted with boarded floors. Wi-Fi facilities are to be provided with access to Internet. The offices shall be kept clean and fit for use at all times.			
	NOTE: The offices, rooms and toilets described here are to be separate structures. The contractor will NOT be permitted to use rooms in the buildings for this purpose. Separate, sturdily built, fully maintained and regularly cleaned buildings are to be provided for this use through out the duration of the contract.			
	Contractor's site office			
	Caminal Tag Continue Communication			
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Meeting room for the use of the principal agent and project team with tables and chairs suitable to seat 20 people. Room to be provided with electrical power for the duration of the contract

Office for use of the principal agent, Clerk of Works and consultant team, size 5×4 x 3m high with two desks, four chairs, lockable filing cabinet and constant electrical power and with shelving and tables suitable to hold material samples for the duration of the contract

Male and female flushing toilets for the exclusive use of the client, user client and consultant team including the Clerk of Works, kept thoroughly clean at all times

Staff and labour sheltered eating areas complying with the requirements of the OHS Act and as directed by the Health and Safety agent

12,1.14 Main notice board

[6.5] Specific requirements:

The contractor shall provide, erect where directed, maintain and remove on completion of the works a notice board size 2.4 x 2.4m as type Drawing GEN 063, constructed of suitable boarding with flat smooth surface and with edging bead 19mm thick round outer edges and projecting 12mm from face of boarding and rounded on front edge. The board shall be securely fixed to hoarding, where hoarding is provided, or fixed to and including a suitable supporting structure of timber or tubular posts and braces. The board is to be painted ivory white and the bead and 12mm wide dividing lines dark green. All wording shall be inscribed in dark green as per the coat of arms for SA. All wording shall be inscribed in dark green painted sans serif lettering

12.1.15 Subcontractors' notice board

[6.6] A subcontractor's notice board is required NO Specific requirements:

12.1.16 Water

[7.2] Option A (by contractor) YES Option B (by employer - free of charge) NO Option C (by employer - metered) NO

12.1.17 Electricity

[7.3] Option A (by contractor) YES Option B (by employer - free of charge) NO Option C (by employer - metered) NO

12.1.18 Telecommunications

[7.4] Telephone – (by contractor) YES Facsimile - By contractor NO Email - By contractor YES

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The contractor shall provide Wii-Fi facilities on site for the use of consultants and client representatives. These are to cover the consultant's offices and the boardroom on site for the duration of the project

12.1.19 Ablution facilities

[7.5] Option A (by contractor)

Option A - by contractor YES

Option B – by employer

12.1.22 Protection of the works

[11.1] Specific requirements:

All precautions are to be taken to prevent damage or harm to the works. The client is to be indemnified against any and all eventualities. The existing buildings are to be insured against damage by the employer. However the contractor is to take all necessary precautions to prevent damage to existing buildings and property whilst he is in possession of the site

12.1.23 Disturbance

[11.5] Specific requirements:

The contractor shall keep the site, structures, etc. well watered during operations to prevent dust and shall provide and erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent

12.1.24 Environmental disturbance [11.6] Specific requirements:

The contractor is to ensure that no environmental damage occurs on or over the site during the execution of the works and whilst he is in possession of the site. All precautions are to be taken to ensure that the water, soil, vegetation and air on and over the site are not contaminated whilst the contractor is in possession of the

12.1.24 Environmental disturbance

[11.6] Specific requirements:

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The contractor is to ensure that no environmental damage occurs on or over the site during the execution of the works and whilst he is in possession of the site. All

precautions are to be taken to ensure that the wate and over the site are not contaminated whilst the co		
12.2 POST-TENDER INFORMATION	,	
12.2.1 Payment of Preliminaries		
Option to be selected by the contractor:	Twist .	
[10.2] Option A (Prorated)		
Option B (Calculated)	-	
12.2.2 Adjustment of Preliminaries		
10.3] Option A (Three categories)		* .
Option B (Detailed breakdown)	•	-
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	12.2.3 Additional agreed preliminaries items:			
	Details:			
	SECTION C: SPECIFIC PRELIMINARIES			
	Section C: Specific Preliminaries:			
İ	Section C contains specific preliminary Items which apply to this contract except where N/A (Not Applicable) appears against an item		:	
	C1 CONTRACT DRAWINGS			
109	The drawings issued with the tender documents do not comprise the complete set but serve as a guide only for tendering purposes and for indicating the scope of the work to enable the tenderer to acquaint himself with the nature and extent of the works and the manner in which they are to be executed Should any part of the drawings not be clearly understood by the tenderer he shall, before submitting his tender, obtain clarification in writing from the principal agent	ltem		
	F: V: T:			
1	Where not described differently the document 'Specification of Materials and Methods to be used (PW371)' is obtainable on the Department of Public Work's website (www. publicworks.gov.za/ under 'Consultants Guidelines) and shall be read in conjunction with the bills of quantities and be referred to for the full descriptions of work methods and materials to be used	Item ¹		
	F: V: T:			
11 11	Wherever a trade name for any product has been described in the bills of quantities, the tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the principal agent being obtained prior to the closing date for submission of tenders If prior written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for	ltem		
;	F: V: T:	<u>.</u>		
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	C4 IMPORTED MATERIALS AND EQUIPMENT	i		
1121	Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations. (refer to Schedule of Imported Materials and Equipment DPW–23(EC) to be completed by tenderer) Notwithstanding any provisions elsewhere regarding the adjustment of contract prices, the price of any item, material or equipment listed in terms of this clause shall be excluded from the Contract Price Adjustment Provisions (if applicable) F:	ltem		
	The contractor must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of clause A 31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment			
	C5.1 AWARENESS CHAMPION			
				!
1	Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification	ltem		
	F: V: T:			
	C5.2 AWARENESS WORKSHOPS			
1141 1	Selection and appointment of a competent Service Provider approved by the principal agent, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multimedia techniques, including follow—up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS			
	Specification	Item		
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	C5.3 POSTERS, BOOKLETS, VIDEOS, ETC.			
115	Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period, all in accordance with the HIV/AIDS Specification	Item		
	F:			
1161 1	Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period, all in accordance with the HIV/AIDS Specification	ltem		
	F: V: T:			
	C5.5 MONITORING			
1171 1 7	Monitoring HIV/AIDS awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification	ltem		
	F: V: T:			
	C6 OCCUPATIONAL HEALTH AND SAFETY ACT			
	The contractor shall comply with all the requirements set out in the Construction Regulations, 2003 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993). It is required of the contractor to thoroughly study the Health and Safety Specification that must be read together with and is deemed to be incorporated under this Section of the bills of quantities. The contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory.			
1181	In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of clause A31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment. Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be			
	entertained.	ltem		
	F: V: T:			
	C6.1 Training (Construction Regulation 8c)			
1	The contractor and sub-contractors shall, before commencing any construction work, submit his training program of all his employees. This program shall from part of the health and safety plan	ltem		
	F: V: T:			
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	C7 TRAINING			
	Provision of Training Allowance in terms of EPWP prescripts			
1201	Training allowance paid to targeted labour in terms of formal training days	Item		
þ				
	F: V: T:			
1211	Extra for administration payment of training allowances to targeted labour (25% of			
7	training allowance)	Item		
	F: V: T:			
1221	Transport and accommodation of workers for training where it is not possible to			
2	undertake the training in close proximity to the site (Provisional Sum)	Item		
2				
123	F:			
123	during the month for the CLO from his home to the construction site	Item		
	F: V: T:			
	C7.1 Payment for Employment and Training of Local Unskilled Workers			
1241	Orientation and Life Skills development training for local unskilled workers for an			
2	average of 10 days per worker	ltem		
4				
	F:			
	Technical skills training for local unskilled workers for an average of 20 days per worker			
125	The tendered sum shall include full compensation for identification of			
	prequalification criteria and training needs, staff assessment and evaluation prior to training, all technical research, development and compilation of an accredited			
	training course and course material, and all other actions necessary for			
	commencement of official training sessions in accordance with the specification.			
	The tendered sum shall also include full compensation for the compilation of a draft syllabus and for incorporation of all the Engineer's comments and corrective			
	requirements	Item		
	F: V: T:			
	C8 TARGETED ENTERPRISES		25 000	00
	Enterprise Development			
126	Needs Analysis and Enterprise Development Plan per Targeted Enterprise (at a rate			
	of R5000.00 per enterprise for 5 enterprises).	Sum		
	F: V: T:			
127	Add for contractor's mark-up and attendance	Item		
	F: V: T:			
	Section No. 1 Bill No. 1			
	Preliminaries			
	27			

LIMPOPO PROVINCIAL THEATRE Amount

Carried To Section Summary

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Section No. 1 Bill No. 1 Preliminaries

1		1	_{II} Amount	l
128	Monitoring and Interim reporting per targeted enterprise (at a rate of R20 000.00 per quarter over 4 quarters)	Per Quarte		
1291	F:	ltem		
9	F: V:		25 000	00
1301 3 0	Project Completion report per Targeted Enterprise	Sum		
131	F:	ltem		
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		}		
	Section No. 1 Bill No. 1 Preliminaries			
	Preliminaries 29			

LIMPOPO PROVINCIAL THEATRE Amount

Carried To Section Summary

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Section No. 1 Bill No. 1 Preliminaries

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PRELIMINARIES			
SECTION SUMMARY			
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SECTION SUMMARY			
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32			l	

Section No. 1 SECTION SUMMARY

SECTION NO. 2 BUILDINGS

	Unit .	Quantity	Rate	Amount	
SECTION NO. 2	ı				
BUILDINGS					
BILL NO. 1					!
FOUNDATIONS (PROVISIONAL)					
(CPAP WORK GROUP NO. 104 UNLESS OTHERWISE					
STATED)					
Key: Location Description:		ļ			
Un/A Unallocated Core Core Bldg (Auto)					
Nor North Block					
Sou South Block					
707.440155					
PREAMBLES					
The contractor is referred to the Model Preambles for Trades (2008 Edition) as issued by the Association of South African					
Quantity Surveyors before pricing this bill					1
SUPPLEMENTARY PREAMBLES					
Note: Supplementary Preambles will apply equally to all					
buildings under construction on this project.					į
Over excavation:					
Any excavation below that indicated on drawings, or required					
by the principal agent in order to obtain a solid foundation,					
or for other reasons, shall be filled in by the contractor at his own expense with 10Mpa concrete				!	
Density tests:					
Density tests measured below are those specifically					ļ
instructed by the engineer to be taken on filling material. All				ļ!	Ì
control tests to ensure layerworks are compacted to the				ll .	
required density are to be allowed for by the contractor in					
scheduled rates Bulk earthworks compaction tests:					
1 x test per 1500 m2 – OMC, Indicator, CBR					
1 x test per 1500 m2 of G7 per 300 mm layer		İ			
Restricted backfill compaction tests:					
1 x test per 5 m2 of selected backfill per 300 mm layer					
Under floors compaction tests:					
1 x test per 1500 m2 of G5 per 150 mm layer					
Testing: The following tests will be required by the consulting engineers in all trades:					
					-
Carried to Collection			R		
Section No. 2					
Bill No. 1					
Foundations (provisional)					
34				Ų1	ŀ

	•	Unit	Quantit	y	Rate	Amount
	Concrete Testing:	:				
	At least one set of cubes per day of casting (i.e.150 x 150 x 150mm)					
	Crushing tests:					
	Foundations: 12 cubes fore every 50 m3.					
	Floor slabs: 12 cubes fore every 50 m3					
(Columns and beams:					
(6 cubes fore every 6 m3. Slump tests: 1 per 6 m3					
1	Nature of ground:					
a	Earth is regarded as loose, hard gravel interspersed with stones not exceeding 100mm in diameter. Earth shall mean all ground other than that classified as "hard rock" or "soft tock" and shall include made—up ground and any loose stones or pieces of concrete not exceeding 0,03 m3 in volume.					
r	Hard rock shall mean granite, quartzite sandstone or other ock of similar hardness, the removal of which requires frilling, wedging and splitting or the use of explosives					
W	oft rock shall mean hard material the removal of which varrants the use of pneumatic tools and includes hard shale, erricite, compact ouklip and material of similar hardness					
tl	ock is to be recorded by photograph and not covered until he consultant engineer and quantity surveyor have had ccess to view					
in in th	the contractor considers that any of the excavations are nore difficult in nature than excavations in "earth", he shall natively notify the principal agent and quantity surveyor writing. If the contractor fails to make such notification, he excavations shall be deemed to be in "earth" and shall be deasured, and valued, accordingly					
pr ar hi	ne contractor may, with the prior written permission of the rincipal agent and in terms of the conditions of contract, use my method he chooses to excavate any class of material, but is chosen method of excavation shall not determine the assification of the materials excavated					
Ri	sk of collapse:					
Th all	ne contractor shall be responsible for the risk of collapse of excavated faces				-	
				!		
	Carried to Collection				R	
	ction No. 2					
	No. 1					
FO	undations (provisional)					
	35				J	l

	I	Unit	Quantity	Rate	ıı Amount
	Where excavations do not exceed 1.5m deep, the nature of the precautions to be taken shall be entirely at the contractor's discretion. The contractor shall either provide temporary support to the excavated faces, or carry the risk of collapse of the faces, with all its implications and possible consequential costs			÷	
	Where excavations exceed 1.5m deep, the contractor shall maintain all excavated faces, in accordance with Statutory and local Authority Regulations, and be responsible for the resultant, and consequential, costs				
	Excavations for working space shall include any additional risk of collapse so incurred				
	Carting away of excavated material:				
	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				
	Filling:				
	Prices for filling and backfilling shall include for all selection and any multiple handling of material				
	Compaction of all "filling" and "backfilling":				
	Unless otherwise described, all "filling" and "backfilling" is hereby deemed to be compacted to 98%Mod.AASHTO dry density				
	EXCAVATIONS etc.				
Ì	Excavate in earth not exceeding 2m deep:				
1	Trenches	m³	135		
	Core 135				
2	Holes	m³	3 106		
3	Core 1314 Nor 870 Sou 922 Lift Pits	m³	228		
	Core 228 Excavate in earth not exceeding 2m and not exceeding 4m deep:				
4	Lift Pits	m³	114		
	Core 114 Extra over trench and hole excavations in earth for excavation in:	·			
5	Soft rock	m³	1 067		
	Core 474 Nor 286 Sou 307				
				-	
	Carried to Collection			R	
•	Section No. 2 Bill No. 1				
	Foundations (provisional)				
	36				II I

1		Unit	Quantity	Rate	Amount
6	Hard rock	m³	1 495		
	Core 1196 Nor 143 Sou 156	,,,	1 133		
	Allow for risk of collapse of excavations:				
7	Sides of holes and trenches excavations exceeding 1.5m deep	m²	5 374		
	Core 2452 Nor 1314 Sou 1608				
	Keeping excavations free of water:				
8	Allow for keeping excavations free of water	ltem			
	Core 1 FILLING				
	Earth filling selected from the excavated material, deposited in layers not exceeding 150mm thick, watered and consolidated to 95% modified AASHTO dry density as backfilling:				
9	Backfilling to trenches, holes, etc.	m³	1 175		
	Core 570 Nor 298 Sou 307				
	Earth filling supplied by the contractor, deposited in layers not exceeding 150mm thick, watered and consolidated to 95% modified AASHTO dry density as filling in foundation:				
10	Filling to trenches, holes, etc.	m³	344		
ļ	Core 187 Nor 80 Sou 77 Prescribed density tests on filling required by the engineer:				
11	Modified AASHTO Density test	No	376		
	Core 274 Nor 42 Sou 60 CARTING AWAY				
ŀ	Extra over all excavations for loading, carting and dumping				
	surplus excavated material (no allowance made for increase in bulk):				
12	Surplus material from excavations to a dumping site to be				
	located by the contractor	m³	3 119		
	Core 1932 Nor 572 Sou 615 Soil poisoning:				
13	Under floors etc, including forming and poisoning shallow				
	furrows against foundation walls etc., filling in furrows and	2	450		
	ramming	m²	450		
14	Core 450 TO bottoms and sides of trenches	m²	248		
	Core 248				
	Carried to Collection			R	
	Section No. 2				
	Bill No. 1	,			
	Foundations (provisional)				
	37				

				LIMP	OPO PROVINCIAL THEATRE
ı		Unit	Quantity	Rate	Amount
	UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
:	20Mpa/19mm Unreinforced concrete cast against excavated				
	surfaces:				
15	Surface blinding under footings and bases	m³	132		
	Core 71 Nor 30 Sou 31		ľ		
	REINFORCED CONCRETE CAST AGAINST EXCAVATED				
	SURFACES				
ĺ	25Mpa/19mm Reinforced concrete:				
16	Footings	m³	17		
	Core 17	9	F00		
17	Column bases	m³	583		
	Core 308 Nor 135 Sou 140		!		
	REINFORCED CONCRETE IN/ON FORMWORK				
	30Mpa/19mm Reinforced concrete:	a	473		
18	Columns in foundations	m³	473		
19	Core 447 Nor 10 Sou 16 Circular columns in foundations	m³	45		
19					
20	Core 17 Sou 28 Concrete wall in foundations	m³	149		
	Core 149				
21	Lift pit surface bed	m³	2		·
	Core 2				,
	ROUGH FORMWORK				
	Rough formwork to sides:				
22	Of concrete walls in foundations	m²	344		
	Core 344	_			
23	Of rectangular stub columns in foundations	m²	782		
	Core 435 Nor 137 Sou 210	No	24		
24	Of 600mm diameter circular column 2m high	NO	44		
	Core 9 Sou 15 REINFORCEMENT	!			
	Mild steel reinforcement to structural concrete work:				
2.	10mm Diameter bars	Tonnes	2		
25		10111103			
26	Core 1 Sou 1 12mm Diameter bars	Tonnes	1		
	Core 1				
	Carried to Collection			R	
	Section No. 2				
	Bill No. 1				
	Foundations (provisional)				
	38				li l

		Unit	Quantity	Rate	Amount	
	High tensile steel reinforcement to structural concrete work:					
27	10mm Diameter bars	Tonnes	3			
28	Core 1 Nor 1 Sou 1 12mm Diameter bars	Tonnes	20			
29	Core 8 Nor 6 Sou 6 16mm Diameter bars	Tonnes	29			
30	Core 14 Nor 8 Sou 7 20mm Diameter bars	Tonnes	35			
31	Core 20 Nor 8 Sou 7 25mm Diameter bars	Tonnes	7			
32	Core 5 Nor 1 Sou 1 32mm Diameter bars	Tonnes	23			
	Core 17 Nor 2 Sou 4 BRICKWORK IN FOUNDATIONS					
	Brickwork of NFX bricks (14Mpa nominal compressive strength) in class I mortar:					
33	230mm brick walls	m²	184		:	
	Core 184 Brickwork reinforcement:					
34	150mm Wide reinforcement built in horizontally	m	1 103			
	Core 1103 Insulation:					
35.3	30mm Thick high density 32–36kg/m3 rigid extruded					
	polystyrene 100% closed cell insulation board in 600mm widths with tongue and groove joints fixed vertically to perimeter concrete and brickwork in foundations all as per					
	manufacturers specifications.	m²	. 3			
	Core 3	·	•		1	
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	Foundations (provisional)	ĺ				
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	FOUNDATIONS (PROVISIONAL)		
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	Bill No. 1		
	Foundations (provisional) 40		
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		Unit	Quantity	Rate	Amount
SECTION NO. 2		ļ			
BUILDINGS					
BILL NO. 2					
EARTHWORKS					
Key:	Location Description:				
Un/A	Unallocated Core Bldg (Auto)				
Core Nor	North Block	;			
Sou	South Block				
<u>PREAMBLES</u>					
	ferred to the Model Preambles for Trades				
(2008 Edition) as iss Quantity Surveyors	sued by the Association of South African before pricing this bill				
SUPPLEMENTARY	<u> PREAMBLES</u>				
	ry Preambles will apply equally to all nstruction on this project.				
Earthworks:					
Supplementary pre equally to this secti	ambles in Foundations section shall apply ion				
SITE CLEARANCE	<u>ETC</u>				
Site clearance:					
Digging up and rem shrubs, bush, etc. a	noving rubbish, debris, vegetation, hedges, and trees not exceeding 200mm girth	m²	250 000		
Core 250000					
Stripping average 1 depositing materia	.50mm thick layer of top soil and I in prescribed stock piles on site	m²	15 000		
Core 15000 REMOVAL OF TR	EES ETC				
Taking out and ren holes:	noving, grubbing up roots and filling in				
Tree of girth excee	ding 200mm and not exceeding 500mm	No	60		
		IVO			
Core 60	ding 500mm and not exceeding 100mm		:		
girth	wu-d ====================================	No	30		
Core 30					
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	Carried to Collection			R	
Section No. 2					
Bill No. 2					
Earthworks	41				

1		Unit	Quantity _I	Rate	l ^{Amount} l	
5	Multi-stemmed tree exceeding 1000mm and not exceeding					
1	1500mm girth	No	10			
i	Core 10					
	Coarse river sand filling supplied by the contractor:					
6	Under floors, etc.	m³	23			
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	Core 23					
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	Section No. 2					
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	Earthworks 42		•			

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BILL NO. 2			
<u>EARTHWORKS</u>			
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Earthworks 42			

	Unit	Quantity	Rate	Amount	
SECTION NO. 2					
BUILDINGS					
BILL NO. 3					
CONCRETE, FORMWORK & REINFORCEMENT					
Key: Location Description: Un/A Unallocated					
Un/A Unallocated Core Core Bldg (Auto)					
Nor North Block					
Sou South Block					
PREAMBLES					
The contractor is referred to the Model Preambles for Trades					Ì
(2008 Edition) as issued by the Association of South African Quantity Surveyors before pricing this bill					
SUPPLEMENTARY PREAMBLES	1		1		
Note: Supplementary Preambles will apply equally to all buildings under construction on this project.					ŀ
SANS Specifications:				-	
Specific SANS Specifications to apply to this trade include SANS 1200G; SANS 1200GE AND SANS 1200GF,					
Concrete finish:					
All exposed concrete is to have a smooth off-shutter finish.					l
All exposed concrete edges are to have 25 x 25mm chamfers. These chamfers are not measured separately and the contractor is to include the cost of this work into rates submitted for formwork.					ı
All exposed concrete slab edges are to have 10 x 10mm rainwater drip around the soffit of the edge. These drips are not measured separately and the contractor is to include the cost of this work into rates submitted for formwork.					
Concrete cube tests:					ļ
Testing by crushing concrete cubes is to be performed by a SANS accredited laboratory and results are to be submitted to the consulting engineer. At least one set of six (6) cubes shall be taken for each day of casting and from at least every 50 cubic metres of concrete placed. Three (3) cubes are to be crushed at 7 days, three (3) cubes at 14 days and four (4) cubes at 28 days. The results submitted to the engineer must contain the date of obtaining the samples and identification of the section of work to which the tests pertain.					
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Bill No. 3					
Concrete, Formwork & Reinforcement					
44		I			

		Unit	Quantity	Rate	Amount	
	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 principal agent. The testing shall be undertaken by a SANS accredited independent laboratory nominated by the contractor to the approval of the consulting engineer. (Test cubes are measured separately).					
	Formwork:					
	Descriptions of formwork shall be deemed to include use and waste only (except where described as 'left in' or 'permanent'), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re—use. Formwork to soffits of solid slabs, etc., shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described Formwork to sides of bases, pile caps, ground beams, etc., will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be					
	included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"					
	Waterproofing admixtures:					
	Tenderer to Include in pricing of exposed cantilever slabs for a crystalline waterproofing admixture such as Xypex or other approved.					
	REINFORCED CONCRETE CAST ON/IN FORMWORK					
	25MPa/19mm concrete:					
1	Plinths and pads	m³	10			
	Un/A 10 30MPa/19mm concrete:					
2	Slabs including beams and inverted beams	m³	3 095			
3	Un/A 3095 Walls	m³	319			
	Un/A 319					
4	Columns	m³	331			
5	Un/A 331 Circular columns	m³	91			
	Un/A 91					
	Carried to Collection			R		
	Section No. 2			К		
ŀ	Bill No. 3					
	Concrete, Formwork & Reinforcement 45					

		Unit	Quantity	Rate	Amount	
		!				
6	Stairs including landings, beams and inverted beams	m³	83			
	Un/A 83	_				
7	Isolated beams	m³	11			
	Un/A 11					
	SUNDRIES	,				
	Sleeves exceeding 250mm not exceeding 500mm long cast into concrete (Provisional):					
8	50mm Diameter uPVC	No	44			
	Un/A 44					
9	75mm Diameter uPVC	No	25			
	Un/A 25	}				
10	110mm Diameter uPVC	No	38			
	Un/A 38					
11	160mm Diameter uPVC	No	22			
	Un/A 22					
	Core drilling (Provisional):					
12	Not exceeding 50mm diameter through 250mm thick					
	concrete	No	40			
	Un/A 40					
13	Not exceeding 100mm diameter through 250mm thick concrete					
	Concrete	No	30			
	Un/A 30					
	35MPa non-shrink grout:					
14	Bedding approximately 30mm thick under base plates, including chamfered edges all round					
	including charmered edges an round	m²	1			
	Un/A 1					
	ROUGH FORMWORK (DEGREE OF ACCURACY II)					
ľ	For the purposes of this Contract smooth formwork shall be					
	deemed to as follows: The inner faces shall be such as will impart to the resultant concrete face a finish equivalent to	P 5				
	one coat plaster and that would be obtained from the use of		į			
	plywood faced shuttering board or special steel forms which	3,,				
	are new when concreting commences and are thoroughly cleaned after each use. Where necessary concrete shall be					
	rubbed down with a carborundum stone					
	Rough formwork to soffits					
15	Landings	m²	72			
13	Un/A 72					
	UnyA 72	9-1				
	,					
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	Concrete, Formwork & Reinforcement					
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		Unit	Quantity	Rate	II Amount	
16	Stairs with sloping soffits	m² l	48		ľ	
	Un/A 48 Boxing in rough formwork to form:					
17	Opening for lift door 2080 x 1200mm high through wall not exceeding 300mm thick	m²	3			
i	Un/A 3 Smooth formwork to sides	:				
18	Rectangular columns	m²	2 330			
19	Un/A 2330 Of 400mm diameter circular columns (b)	m².	11			
20	Un/A 11 Of 500mm diameter circular columns (b)	m²	18			
21	Un/A 18 Of 600mm diameter circular columns	m² :	48			
22	Un/A 48 Inner face of shaft walls	m²	213			
	Un/A 213					
23	Walls with total height exceeding 9,5m and not exceeding 11m above bearing level	m²	213			
24	Un/A 213 Plinths and pads	m³	20			1.
	Un/A 20 Finishing top surfaces of concrete smooth with a wood float including filling on holes with cement slurry:					
25	Surface beds and slabs, etc.	m²	9 813			
26	Un/A 9813 Rub down soffits of slabs	m²;	180			
	Un/A 180 CONCRETE SUNDRIES					
	Test cubes:					
27	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	160			
28	Un/A 160 Provide the sum of R10 000.00 (Ten Thousand Rand) for adhoc testing by Consulting Engineer	Prov Sum		į		
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	Section No. 2					
	Bill No. 3					
	Concrete, Formwork & Reinforcement					
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		Unit	Quantity	Rate	Amount	
	High tensile steel reinforcement to structural concrete work	T	0.70			
39	10mm Diameter bars	Tonnes	9.20	:		
40	Un/A 9.2 12mm Diameter bars	Tonnes	307.86			
41	Un/A 307.86 16mm Diameter bars	Tonnes	93			
42	Un/A 93 20mm Diameter bars	Tonnes	241			
43	Un/A 241 25mm Diameter bars	Tonnes	34			
44	Un/A 34 32mm Diameter bars	Tonnes	264			
-,.	Un/A 264					
	Fabric reinforcement:					
45	Type 193 fabric reinforcement in concrete slabs etc.	m²	2 192			
46	Un/A 2192 Type 245 fabric reinforcement in concrete slabs etc.	m²	1 316			
47	Un/A 1316 Type 395 fabric reinforcement in concrete slabs etc.	m²	308			
48	un/A 308 Type 617 fabric reinforcement in concrete surface beds etc.	m²	50			
	Un/A 50 Expansion joints with 10mm closed cell expanded polyethylene between vertical concrete and brick surfaces:					
49	Not exceeding 300mm high to edges of surface beds.	m	395			
	Un/A 395		!			
	MOVEMENT JOINTS ETC					
	Saw-cut joints:		1 853			
50	6 x 30mm Saw–cut joints in top of concrete (provisional)	m	1 855			
	Un/A 1853 Horizontal joggle construction joints through concrete including debonding agent applied to one face and including reaming out 6 x 30mm joint in top surface:					
51	Surface beds not exceeding 300mm thick (provisional)	m	2 815			
	Un/A 2815					
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	Concrete, Formwork & Reinforcement 49					
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CONCRETE, FORMWORK & REINFORCEMENT			
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Concrete, Formwork & Reinforcement			

		Unit	Quantity	Rate	Amount
SECTION NO. 2					
BUILDINGS					
BILL NO. 4					:
<u>MASONRY</u>		·			
	OUP NO. 118 UNLESS OTHERWISE				
STATED) Key:	Location Description:				
Un/A	Unallocated				
Core	Core Bidg (Auto)	į			
Nor Sou	North Block South Block				
PREAMBLES					
(2008 Edition) as is	eferred to the Model Preambles for Trades sued by the Association of South African before pricing this bill				
SUPPLEMENTAR'					
Note: Supplementa	ary Preambles will apply equally to all natruction on this project.				
Hollow walls:			:		:
	low walls shall be deemed to include perpend of the bottom course of the as a weep hole.				
Wall ties:					
Descriptions of soli cavity walls shall be complying with SAI modified PWD type built at least 75mm	d walls (except if built in English bond) and e deemed to include metal wall ties NS 28: 1986 and of the butterfly or of the e, of the required length with each end n into brickwork, spaced at not more than tively to every third course of brickwork				
Face bricks:					i
	ered timeously to obtain uniformity in size				
Pointing:					
Descriptions of rec face brickwork sha	essed pointing to fair face brickwork and Il be deemed to include square recessed, reathered pointing, etc.				
Bricks:	and the second s				1
Bricks to be in acco	ordance with SANS 0146.				
	Carried to Collection			R	
Section No. 2					
Bill No. 4					
Masonry	51				

ı		Unit	Quantity	Rate	Amount
	Loadbearing brickwork to be in accordance with SANS 0164.	i			
	Bricks to have a minimum crushing strength of 15MPa.				
	All masonry walls to be laid to standards and tolerances in compliance with SANS 10164 and SANS 10145				
	Mortar:				
	Mortar to be Class II to SANS 10164, U.O.N				
l	Masonry cement to comply with requirements of SANS 50413-1 type MC5				
	Samples:				
	Samples of all masonry building units, except those for walls described as "load bearing", shall consist of a minimum of 6 units. Samples of building units to be used in walls described as "load bearing" shall consist of 30 units from every 30 000 units delivered to site				
	BRICKWORK IN SUPERSTRUCTURE				
	Brickwork of NFP bricks in class II mortar:				
1	Half brick walls	√m²	279		
2	Core 58 Nor 147 Sou 74 230mm brick walls	m²	1 421		
3	Core 1421 230mm brick walls circular on plan	m²	569		
4	Core 460 Sou 109 250mm brick walls	m²	1 028		
5	Core 1028 320mm brick walls	m²	9 879		
	Core 7229 Nor 754 Sou 1896 Bagging of 1:3 cement and sand mixture:				
_		m²	154		
6	On brick walls Core 154				
7	On concrete walls including removing fins, irregularities, etc.	m²	105		
	Core 105 BRICKWORK COPINGS, SILLS, ETC:				
	Brick-on-edge header course copings, sills, etc:		:		
8	Brick coping 320mm wide.	m	226		
	Core 226				
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	Carried to Collection			R	
	Section No. 2				
	Bill No. 4				
	Masonry 52				
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		Unit	Quantity	Rate	Amount	[
	PRICKWARK STRINGES					
	BRICKWORK SUNDRIES Brickwork reinforcement:		ļ			
9	75mm Wide reinforcement built in horizontally.	m	169			
,	Core 169					
10	150mm Wide reinforcement built in horizontally.	m	7 202			
	Core 7202	m	26 401			
11	230mm Wide reinforcement built in horizontally.	m	20 401			
	Core 26401 Prestressed fabricated lintels:					i
12	100 x 70mm Lintels in lengths not exceeding 3m	m	1 238			
	Core 1238					
13	38 x 1,6mm Cramp 500mm long with one end fixed to timber and other end built into brickwork.	No	120			
	Core 120					!
	Galvanised hoop iron cramps, ties, etc:					
14	30 x 1,6mm Wall tie 500mm long with one end shot pinned to		4.056			
	concrete and other end built into brickwork	No	1 356			
	Core 1356 BRICKWORK SUNDRIES					
	Turning pieces to lintels etc:					
15	230mm Wide turning pieces	m	91			
	Core 91		100			
16	320mm Wide turning pieces	m	106			
	Core 106 MOVEMENT JOINTS					
	10mm bitumen impregnated softboard between concrete		. 1			
	and brick surfaces:		i			
17	Not exceeding 300mm wide, horizontally	m	443			
18	Core 443 Not exceeding 300mm wide, vertically	m	107			
10	Core 107					
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	Bill No. 4					ļ
	Masonry 53					

		Unit	Quantity	Rate	Amount
	FACE BRICKWORK				
	Extra over ordinary brickwork for facebrick work (Provisional):				
19	Extra over ordinary brickwork for facing and pointing in face bricks at a PC sum of R8000,00 per thousand to match existing including pointing and jointing in 1:3 cement mortar.	m²	3 558		
	Core 2235 Nor 607 Sou 716 Brick-on-edge header course copings, sills, etc. of Exposed Heritage Travertine face bricks, pointed with recessed joints on all exposed faces:				
20	320mm Wide sills set sloping and slightly projecting.	m	190		
	Core 190 FIBRE-CEMENT WINDOW SILLS				
	Slate grey sills in single lengths bedded in class II mortar including metal fixing lugs etc.		į		
21	10 x 110mm Wide sills set flat and slightly projecting	m	23		
	Core 23 STONE WALL CLADDING		:		
22	Mountain ledge stone cladding to architects approval laid in accordance with the manufacturers instructions (Provisional)	m²	107		
	Core 107 BUILDER'S WORK IN CONNECTION WITH SPECIALIST INSTALLATIONS				;
	The items in this bill are measured in accordance with the bills measured above and all preambles and supplementary preambles will apply equally to this bill	;	:		
	Forming holes and openings:				
23	Form hole not exceeding 100mm diameter in half brick walls	No	80		
24	Un/A 80 Form hole not exceeding 100mm diameter in one brick walls	No	50		
25	Un/A 50 Form hole not exceeding 100mm diameter in 320mm brick walls	No	30		
26	Un/A 30 Form hole not exceeding 250mm diameter in half brick walls	No	30		
27	Un/A 30 Form hole not exceeding 250mm diameter in one brick walls	No	30		
	Un/A 30				
	Carried to Collection			R	
	Section No. 2				
	Bill No. 4 Masonry				
	54				

		Unit	Quantity	Rate	Amount
2	Form hole not exceeding 250mm diameter in 320mm brick				
	walls	No	20		
	Un/A 20	.,,	20		
29	Form opening not exceeding 1m in girth in half brick walls	No	10		
	Un/A 10				
30	The state of the state of the william	No	5		
24	Un/A 5				
31	1 B STATE OF THE S	No	4		
32	Un/A 4 Form opening not exceeding 2m in girth in half brick walls		_		
02	Un/A 2	No	2		
33	1	No	2		
	Un/A 2	110	2		
34		No	2		
	Un/A 2		_		
	Sleeves:				
35					
	hole in one brick wall	No	20		
2.0	Un/A 20				
36	1mm Thick galvanised mild steel sleeve for 250mm diameter hole in 320mm brick wall				
	Un/A 10	No	10		
37	1mm Thick galvanised mild steel sleeve for hole not				
	exceeding 1m in diameter through one brick wall	No	5		
	Un/A 5				
38	1mm Thick galvanised mild steel sleeve for hole not			i	
	exceeding 1m in diameter through 320mm brick wall	No	5		
	Un/A 5				
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BILL NO. 4				
MASONRY				
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COLLECTION				
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Section No. 2 Bill No. 4				
Masonry				
	56			

	Unit	Quantity	Rate	Amount
SECTION NO. 3				
SECTION NO. 2				
BUILDINGS				
BILL NO. 5				
WATERPROOFING (CDAD MODIC CROUD NO. 120 LINUESS OTHERWISE	i			
(CPAP WORK GROUP NO. 120 UNLESS OTHERWISE STATED)				
Key: Location Description:				
Un/A Unallocated				
Core Core Bldg (Auto) Nor North Block				
Sou South Block				
DDFAMADLES	ł			
PREAMBLES The control of the contro		j		
The contractor is referred to the Model Preambles for Trades (2008 Edition) as issued by the Association of South African				
Quantity Surveyors before pricing this bill				
SUPPLEMENTARY PREAMBLES				
Note: Supplementary Preambles applicable to trades in the				
Building section will apply equally to all buildings under				
construction on this project.				
Waterproofing:				
Waterproofing of roofs, basements, etc. shall be laid under a ten year guarantee unless otherwise stated. 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.		İ		
Waterproofing guarantees are required. Guarantees will be				
for the material and for the installation. Contractors are to				
only use applicators approved by the manufacturers. The manufacturers are to have a quality control system in place.				
Responsibility to ensure that the material, application and				
issue of guarantees to the principal agent will remain the				
responsibility of the main contractor.				
DAMPPROOFING OF WALLS AND FLOORS				
One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B):				
In walls	m²	580		
Core 580				
·				
Carried to Collection			R	
Section No. 2	ſ			
Bill No. 5 Waterproofing				
57 ·				

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		Unit,	Quantity	Rate	I Amount
) to well				
•	2 In walls	m²	144		
:	Core 144 In walls vertically at reveals	2			
•		m²	75		
	Core 75 One layer 250 micron green polyethylene waterproof				
	sheeting (SANS 952-1985 type A) sealed at laps with PVC self-adhesive tape:				
4	Under surface beds (Provisional)	m²	450		
	Core 450				
	One layer 500 micron orange polyethylene waterproof sheeting (SANS 952-1985 type A) sealed at laps with PVC self-adhesive tape:				
5	Under surface beds (Provisional)	m²	100		
	Core 100				
	Sika Sealoflex Professional waterproofing with a ten year				
	guarantee applied by an approved installer in strict accordance with the manufacturer's specifications:				
6	On parapet walls (Provisional)	m²	120		
	Core 120	. Fall a	7. 4. 777		
	One layer of Bituthene 3000 waterproofing:				
7	To vertical sides of walls and retaining walls (Provisional)	m²	87		
	Core 87				
	Prepare and apply concrete primer and one layer Derbigum CG3 fully bonded waterproofing and one layer 4mm Derbigum CG4 fully bonded waterproofing laid with 75mm side and 100mm end laps with a ten year guarantee including 10mm thick softboard backing, all in strict accordance with the manufacturer's instructions:				
8	To vertical sides of retaining walls (Provisional)	m²	87	.	
	Core 87	į			
	WATERPROOFING TO ROOFS, ETC				
	Prepare and apply concrete primer and one layer Derbigum	İ			
	SP4 waterproofing modified bitumen membrane system laid	12			
	with 75mm side and 100mm end laps with a ten year guarantee all in accordance with the manufacturer's				
ĺ	Instructions:				
9	On flat roofs	m² l	324		
İ	Sou 324				
10	120mm High upturns to concrete and sealing edges to				
	brickwork or concrete including trowelled mastic bead	m	146		
	Sou 146				
	Carried to Collection			R	
	Section No. 2			` -	
	Bill No. 5			İ	
ŀ	Waterproofing		i		
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		Unit _i	Quantity	Rate	i Amount i	
11	1000 x 1000mm Dressing around full bore outlet or roof drain	No	3			
40	Core 3			r		
12	Collar and sealing around pipe not exceeding 100mm internal diameter (provisional)	No	3			
		INO	3			
	Sou 3 PROTECTIVE STONE DRESSING	**;	*	ŀ		
	Stone protection to waterproofed flat roofs:					
13	19–25mm Clean crushed stone laid in 160mm thick later over					
	waterproofing on flat roofs	m²	324			
	Core 324					
	PROTECTIVE ROOFING PAINT					
	Two coats Silvakote bituminous aluminium paint:					
14	On waterproofing to roofs	m²	324			
	Core 324					
	SEALING STRIPS, JOINT SEALANTS, ETC (PROVISIONAL)		,			
	Silicone sealant:					
15	5 x 5mm Joint between counter tops and wall tiling	m	90			
	Core 90					
	Sikaflex Pro3 iCure or other approved polysulphide sealing					
	compound with a three year guarantee including polyethylene backing cord, bond breaker, primer, etc:					
16	10 x 15mm In expansion joints in walls	m	60			
	Core 60					
	Pro-struct Dymonic NT Polyurethane elastromeric sealing					
	compound including backing cord, bond breaker, primer,					
	etc: or similar approved:					
17	40 x 3mm in saw cut joints in floors	m	260			
18	Core 260 10 x 10mm in expansion joints including raking out expansion					
10	joint filler as necessary	m	350			
	Core 350					
19	10 x 15mm In expansion joints in floors	m	300			
	Core 300					
20	15 x 15mm in expansion joints in walls	m	70			
	Core 70		50			
21	15 x 20mm In expansion joints in walls	m	60			
	Core 60		;			
	Carried to Collection			R		
	Section No. 2					
	Bill No. 5				,	
	Waterproofing					
	59	İ				

1		Unit	Quantity	Rate	Amount	
	Compriband bitumen impregnated foam plastic joint sealing strips:				i	
22	20 x 20mm in joints between frames and walls	m	415			
	Core 415 Sondor polycord expanded polyethylene foam sealant backing cords or equally approved, of suitable diameter, compressed and fitted into joint:					
23	In 20mm isolation joints between brickwork and concrete slab	m	45			
	Core 45 Thioflex 600 two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc:					
24	10 x 10mm In isolation joints in floors	m	60			
25	Core 60 15 x 10mm In expansion joints in floors including raking out expansion joint filler as necessary	m	487			
	Core 487					
						i
	Carried to Collection			R		
	Section No. 2					
	Bill No. 5					
	Waterproofing					
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BILL NO. E				
BILL NO. 5				
WATERPROOFING				
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Section No. 2				
Bill No. 5				
Waterproofing	61			

		Unit	Quantity	Rate	II Amount
	SECTION NO. 2				
	BUILDINGS				
	BILL NO. 6				
	ROOF COVERINGS				
	(CPAP WORK GROUP NO. 124 UNLESS OTHERWISE				
	STATED)				
	Key: Location Description: Un/A Unallocated				
	Core Core Bldg (Auto)				
	Nor North Block Sou South Block				
	554W 555W				
	PREAMBLES				
İ	The contractor is referred to the Model Preambles for Trades				
	(2008 Edition) as issued by the Association of South African				
	Quantity Surveyors before pricing this bill				
	SUPPLEMENTARY PREAMBLES				
	Straight cutting:				
	Descriptions of all roof coverings are deemed to include for all straight cutting				
	PROFILED METAL SHEETING AND ACCESSORIES				
-	Where roof coverings are fixed on top of rigid board insulation to purlins etc, descriptions of roof coverings shall include thereof Note that sheeting is also available in Corten steel, stainless steel, copper and aluminium				
	Safintra 0.50mm thick SAFLOK 700 Colourplus AZ150 interlocking roof sheeting fixed to steel internal				
	purlins at 2000mm, and ridge/ eaves purlins at 1700mm centres using SAFLOK 700 clips screw fixed to steel purlins with Fixtite or Safintra approved wafer head self-tapping screws and including 125mm thick insulation bonded to underside of sheeting:				
1	Roof covering with pitches not exceeding 25 degrees.	m²	6 201		
	Core 4209 Nor 1992				
2	Roof covering with pitches not exceeding 25 degrees circular on elevation	,	622		
		m²	620		
	Core 620				
	Carried to Collection			R	
	Section No. 2				
	Bill No. 6				
	Roof Coverings				
	62		ļ		

1		Unit	Quantity	Rate	Amount	
	Accessories to roof sheeting comprising 0.6mm galvanised sheet iron with "Globalcoat" finish on one side with broad flute closures to suit roof profile where necessary, all in accordance with architects drawings and manufacturer's specifications:					
3	Side wall flashing girth 462mm	m	50			
	Core 50					
4	Counter flashing girth 185mm	m	50			
5	Core 50 Counter flashing girth 185mm circular on elevation	m	39			
6	Core 39 Head wall flashing girth 462mm	m	220			
7	Core 220 Head wall flashing girth 462mm circular on elevation	m	39			
8	Core 39 Apex flashing girth 660mm	m	215			
	Core 215 ROOF INSULATION		14-114.			
9	Roof insulation fixed concurrent with roof sheeting: Factorylite Isover 50mm x 1200mm wide non-combustible flexible lightweight industrial roof insulation with white metalized foil facing, fixed under roof sheeting and over purlins, all in accordance with manufacturer's recommendations	m²	6 201			
		***	0 201			
	Core 6201					
	A Company of the Comp	٠. ا	* :			
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	Roof Coverings					
	63				H	

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			Amount
DILL NO. 6			
BILL NO. 6			
ROOF COVERINGS			
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Section No. 2 Bill No. 6			
Roof Coverings			
	64		

I	Unit	Quantity	l Rate	Amount	1
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SECTION NO. 2					
BUILDINGS					
BILL NO. 7					
CARPENTRY AND JOINERY					
(CPAP WORK GROUP NO. 126 UNLESS OTHERWISE					
STATED) Key: Location Description:					
Un/A Unallocated					
Core Core Bldg (Auto)					
Nor North Block					
Sou South Block					
PREAMBLES					
The contractor is referred to the Model Preambles for Trades					
(2008 Edition) as issued by the Association of South African					
Quantity Surveyors before pricing this bill					
SUPPLEMENTARY PREAMBLES					
Note: Supplementary Preambles applicable to trades in the					
Building section will apply equally to all buildings under					
construction on this project.	ļ				
Fixing:					
Items described as 'nailed' shall be deemed to be fixed with					
hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete.					
Items described as 'plugged' shall be deemed to include					
screwing to fibre, plastic or metal plugs at not exceeding					
500mm centres, and where described as 'bolted', the bolts					
have been given elsewhere.					
Joinery:					
Descriptions of frames shall be deemed to include frames,					
transomes, rails, etc.				1	
Descriptions of hardwood joinery shall be deemed to include					
sinking and pelleting heads and nuts of bolts.					
Roof coverings:					
Roof coverings are mild steel sheeting on purlins.					
Ceilings are suspended 135mm glasswool insulation laid on exposed T-system grid.					
CAPOSCA : System Brian					
Carried to Collection			R		
Section No. 2					
Bill No. 7					
Carpentry And Joinery					
65					

		Unit _I	Quantity	Rate	Amount	
	References given in descriptions refer to the respective types of trusses detailed on the architect's drawings included with the set of drawings issued by the architects accompanying these bills of quantities for tender purposes.					
	Dimensions in descriptions of trusses are nominal and actual measurements are to be taken on site before design or fabrication commences.					
	SKIRTINGS					
	Wrought Meranti:					
1	22x150mm Skirting with 22mm quarter round, nailed, punched and filled	m	647			
	Core 647 DOORS					
	Semi-solid flush doors with Meranti veneer both sides, hung to steel frames:					
2	40mm Door, size 850 x 2100mm high	No	31			
	Core 31 Solid core door with Masonite linings both sides, hung to steel frame:					
3	40mm Door, size 813 x 2210mm high	No	37			
4	Core 37 40mm Door, size 915 x 2032mm high	No	12			
5	Core 12 40mm Door, size 1200 x 2100mm	No	2			
6	Core 2 Extra over for 600 x 300mm framed opening for metal louvre unit (louvre unit elsewhere)	No	49			
	Core 49 Heavy duty solid laminated external quality flush doors:			i		
7	44mm Door, size 688 x 2032mm high	No	21			
	Core 21 Solid Mahogany doors:					
8	44mm Glazed double door comprising timber stanchions, head, cill and glazing bars and with each leaf including four equally sized 6mm thick GSA Smartglass Clearvue glass panes, size 1500 x 2100mm high all as per Door Schedule D02	No	63			
	Core 63					
			i			<u> </u>
	Carried to Collection			R		
	Section No. 2					
	Bill No. 7 Carpentry And Joinery					
	Carpentry And Jonlery 66					
	7E					

"Varikusk" or equally approved fire doors and frames fixed to brick walls, each leaf with three stainless steel 100 x 75 x 3mm hinges to a galvanised mild steel 2mm frame including all fixing with lined each side with 4mm veneer skin finish suitable for painting Fire door, size 1200 x 2100mm high No Core 8 10 Double fire door, size 1930 x 3040mm high No Core 10 Double agoustic fire door comprising of two equal leaves overall size 1830 x 2400mm high, each leaf with three stainless steel 100 x 75 x 3mm hinges to a galvanised mild steel 2mm frame including all fixing and lined each side with 4mm veneers skin finish suitable for painting No 12 Core 12 FRAMES, ETC. Wrought Meranti: 26 93 x 107mm Rebated frames Core 49 13 19 x 19mm Quarter round beads Core 196 Timber panelling of 133 x 50mm UH61 Colour Walnut battens fixed at 50mm spacing to walls with 2000 x 3000mm high dance studio mirrors mounted on the walls Nor 202 15 150 x 50mm UH61 Colour Walnut battens fixed at 50mm spacing to walls with 2000 x 3000mm high dance studio mirrors mounted on the walls Core 231 Nor 393 STAGE FLOORING 9. Jum Oak wood Solid hardwood or ask engineered board with a hardwood wear layer on A 12mm thick WBP phywood followed by a 9mm thick water-proof solid hardwood panel is fixed on top 075x20mm counter batten frame with a Triple layer of Criscom machined southern yellow pine mounted on Dual density shock dampening elastomer blocks at predetermined intervals installed complete: 16 On floors Core 245 Nor 680 Sou 364			Unit,	Quantity _l	Rate	Amount	
to brick walls, each leaf with three stainless steel 100 x 75 x 3mm hinges to a galvanised mild steel garm frame including all fixing with lined each side with 4mm veneer skin finish suitable for painting Fire door, size 1200 x 2100mm high Core 6 Oouble fire door, size 1930 x 3040mm high Core 7 Double agoustic fire door comprising of two equal leaves overall size 1330 x 2400mm high, each leaf with three stainless steel 100 x 75 x 3mm hinges to a galvanised mild steel 2mm frame including all fixing and lined each side with 4mm veneers skin finish suitable for painting No Core 12 FRAMES, ETC. Wrought Meranti: 69 x 107mm Rebated frames Core 49 13 19 x 19mm Quarter round beads m 196 Core 196 TIMBER WALL CLADDING Wall cladding: 14 Timber panelling of 133 x 50mm UH61 Colour Walnut battens fixed at 50mm spacing to walls with 2000 x 3000mm high dance studio mirrors mounted on the walls Nor 202 15 150 x 50mm UH61 Colour Walnut battens fixed at 50mm spacing to walls Core 231 Nor 393 STAGE FLOORING 91mm Oak wood Solid hardwood or oak engineered board with a hardwood wear layer on A 12mm thick WBP phywood followed by a 9mm thick water-proof solid hardwood panel is fixed on top of 75x20mm counter batten frame with a Triple layer of custom machined southern yellow pine mounted on Dual density shock dampening elastomer blocks at predetermined intervals installed complete: 16 On floors m² 1290							
to brick walls, each leaf with three stainless steel 100 x 75 x 3mm hinges to a galvanised mild steel gam frame including all fixing with lined each side with 4mm veneer skin finish suitable for painting Fire door, size 1200 x 2100mm high Core 8 10 Double fire door, size 1930 x 3040mm high Core 17 Double acoustic fire door comprising of two equal leaves overall size 1830 x 2400mm high, each leaf with three stainless steel 100 x 75 x 3mm hinges to a galvanised mild steel 2mm frame including all fixing and lined each side with 4mm veneers skin finish suitable for painting No Core 12 FRAMES, ETC. Wrought Meranti: 69 x 107mm Rebated frames Core 49 19 x 19mm Quarter round beads Core 396 TIMBER WALL CLADDING Wall cladding: 17 Timber panelling of 133 x 50mm UH61 Colour Walnut battens fixed at 50mm spacing to walls with 2000 x 3000mm high dance studio mirrors mounted on the walls Nor 202 Nor 202 Nor 202 Nor 203 Somm UH61 Colour Walnut battens fixed at 50mm spacing to walls Core 231 Nor 393 STAGE FLOORING 91mm Oak wood Solid hardwood or oak engineered board with a hardwood wear layer on A 12mm thick WBP plywood followed by a 9mm thick water-proof solid hardwood panel is fixed on top of 75x0cmm counter batten frame with a Triple layer of custom machined southern yellow plne mounted on Dual density shock dampening elastomer blocks at predetermined intervals installed complete: 16 On floors with the double walls installed complete: 16 On floors m² 1290							
to brick walls, each leaf with three stainless steel 100 x 75 x 3mm hinges to a galvanised mild steel gam frame including all fixing with lined each side with 4mm veneer skin finish suitable for painting Fire door, size 1200 x 2100mm high Core 8 10 Double fire door, size 1930 x 3040mm high Core 17 Double acoustic fire door comprising of two equal leaves overall size 1830 x 2400mm high, each leaf with three stainless steel 100 x 75 x 3mm hinges to a galvanised mild steel 2mm frame including all fixing and lined each side with 4mm veneers skin finish suitable for painting No Core 12 FRAMES, ETC. Wrought Meranti: 69 x 107mm Rebated frames Core 49 19 x 19mm Quarter round beads Core 396 TIMBER WALL CLADDING Wall cladding: 17 Timber panelling of 133 x 50mm UH61 Colour Walnut battens fixed at 50mm spacing to walls with 2000 x 3000mm high dance studio mirrors mounted on the walls Nor 202 Nor 202 Nor 202 Nor 203 Somm UH61 Colour Walnut battens fixed at 50mm spacing to walls Core 231 Nor 393 STAGE FLOORING 91mm Oak wood Solid hardwood or oak engineered board with a hardwood wear layer on A 12mm thick WBP plywood followed by a 9mm thick water-proof solid hardwood panel is fixed on top of 75x0cmm counter batten frame with a Triple layer of custom machined southern yellow plne mounted on Dual density shock dampening elastomer blocks at predetermined intervals installed complete: 16 On floors with the double walls installed complete: 16 On floors m² 1290		"Varikusk" or equally approved fire doors and frames fixed					
all fixing with lined each side with 4mm veneer skin finish suitable for painting Fire door, size 1200 x 2100mm high Core 6 Double fire door, size 1930 x 3040mm high No 7 Double acoustic fire door comprising of two equal leaves overall size 1830 x 2400mm high, each leaf with three stainless steel 100 x 75 x 3mm hinges to a galvanised mlld steel zmm frame including all fixing and lined each side with 4mm veneers skin finish suitable for painting No 12 Core 12 FRAMES, ETC. Wrought Meranti: 13 69 x 107mm Rebated frames Core 49 13 19 x 19mm Quarter round beads Core 196 TIMBER WALL CLADDING Wall cladding: 14 Timber panelling of 133 x 50mm UH61 Colour Walnut battens fixed at 50mm spacing to walls with 2000 x 3000mm high dance studio mirrors mounted on the walls Nor 202 15 150 x 50mm UH61 Colour Walnut battens fixed at 50mm spacing to walls with 2000 x 3000mm high dance studio mirrors mounted on the walls Nor 202 150 x 50mm UH61 Colour Walnut battens fixed at 50mm spacing to walls STAGE FLOORING 91mm Oak wood Solid hardwood or oak engineered board with a hardwood wear layer on A 12mm thick WBP phywood followed by a 9mm thick water-proof solid hardwood panel is fixed on top of 75x20mm counter batten frame with a Triple layer of custom machined southern yellow pine mounted on Dual density shock dampening elastomer blocks at predetermined intervals installed complete: On floors On floors		to brick walls, each leaf with three stainless steel 100 x 75 x					
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Wall cladding: Timber panelling of 133 x 50mm UH61 Colour Walnut battens fixed at 50mm spacing to walls with 2000 x 3000mm high dance studio mirrors mounted on the walls m² 202 Nor 202 15 150 x 50mm UH61 Colour Walnut battens fixed at 50mm spacing to walls m² 624 Core 231 Nor 393 STAGE FLOORING 91mm Oak wood Solid hardwood or oak engineered board with a hardwood wear layer on A 12mm thick WBP plywood followed by a 9mm thick water-proof solid hardwood panel is fixed on top of 75x20mm counter batten frame with a Triple layer of custom machined southern yellow pine mounted on Dual density shock dampening elastomer blocks at predetermined intervals installed complete: 16 On floors m² 1290	l	Core 196					
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followed by a 9mm thick water-proof solid hardwood panel is fixed on top of 75x20mm counter batten frame with a Triple layer of custom machined southern yellow pine mounted on Dual density shock dampening elastomer blocks at predetermined intervals installed complete: On floors 1290		91mm Oak wood Solid hardwood or oak engineered board					
is fixed on top of 75x20mm counter batten frame with a Triple layer of custom machined southern yellow pine mounted on Dual density shock dampening elastomer blocks at predetermined intervals installed complete: On floors m² 1290		with a hardwood wear layer on A 12mm thick WBP plywood					
Triple layer of custom machined southern yellow pine mounted on Dual density shock dampening elastomer blocks at predetermined intervals installed complete: On floors 1290		is fixed on top of 75x20mm counter batten frame with a					
blocks at predetermined intervals installed complete: On floors 1290		Triple layer of custom machined southern yellow pine		-			
16 On floors m ² 1 290		mounted on Dual density shock dampening elastomer					
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Carpentry And Joinery							
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				LIMPC	JPO PROVINCIAL I III	LATINE
1		Unit	Quantity	Rate	Amount	
17	6mm Oil tempered hardboard laid on two layers of 18mm birch plywood all glued together for installation and placed on 85 x 70mm battens and 10 x 50 x 100mm rubber pads at predetermined intervals. A layer of 90mm thick mineral wool to be placed in between battens and rubber pads. 6mm oil tempered hardboard to receive 3 coats of matt black paint: On floors Core 55 Black Harlequin Standfast vinyl performance surface laid into adhesive with seams hot welded as per manufacturer's instruction on 1089 x 2014 x 20mm Black stained birch plywood panel joined together by a special tongue and groove, which is glued together for permanent installation,	Unit m²	Quantity 55	Rate	Amount	
	supported and laid on 85 x 50 x 100mm rubber pads laid 316mm centre to centre equating to 14 per panel:					
18	On floors	m²	50			
	Core 50 Multi timber flooring consisting of 24mm plywood as first layer and 22mm saligna timber as top layer laid in accordance with manufacturers instructions:		:		i	
19	On floors	m²	99			
20	Core 99 Edges, risers, ends and reveals exceeding 300mm high or wide and not exceeding 500mm high	m²	40			
	Core 40 JOINERY FITTINGS					
	Cupboards:					
21	Wall unit approximately 1064mm x 600mm x 600mm high (size to be confirmed on site), all as per Architects Detail	No	1			
22	Core 1 Wall unit approximately 2000mm x 300mm x 600mm high (size to be confirmed on site), all as per Architects Detail	No	2			
23	Core 2 Wall unit approximately 2120mm x 300mm x 600mm high (size to be confirmed on site), all as per Architects Detail	No	1			
24	Core 1 Wall unit approximately 2150mm x 600mm x 600mm high (size to be confirmed on site), all as per Architects Detail	No	1			
	Core 1					
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	Carpentry And Joinery					
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ı		Unit _i	Quantity	Rate	l Amount	
25	Wall unit approximately 2150mm x 300mm x 600mm high					
-	(size to be confirmed on site), all as per Architects Detail	No	2			
	Core 2					
26	Wall unit approximately 3250mm x 600mm x 600mm high					
İ	(size to be confirmed on site), all as per Architects Detail	No	1			
	Core 1					
27	Top hung cabinets approximately 3425mm x 300mm x					
	600mm high (size to be confirmed on site), all as per					
	Architects Detail	No	1			
	Core 1					
28	Top hung cabinets approximately 4825mm x 300mm x					
	600mm high (size to be confirmed on site), all as per Architects Detail	No	1			
		NO	1			
20	Core 1		İ			
29	Top hung cabinets approximately 5840mm x 300mm x 600mm high (size to be confirmed on site), all as per					
	Architects Detail	No	1			
	Cours 1		_			
30	Core 1 Floor unit approximately 2500mm x 600mm x 775mm high		* ** *			
	(size to be confirmed on site), with 32mm formica post-					
	formed worktop counter top etc, all as per Architects Detail					
		No	1	:		
	Core 1			:		
31	Floor unit approximately 2550mm x 600mm x 775mm high					
	(size to be confirmed on site), with 32mm formica post- formed worktop counter top etc, all as per Architects Detail					
	Torried Worktop Counter top etc, an as per Architects betan	No	1			
İ			-			
32	Core 1 Floor unit approximately 2665mm x 600mm x 775mm high					
52	(size to be confirmed on site), with 32mm formica post-					
	formed worktop counter top etc, all as per Architects Detail					
	and the second of the second o	No	1			
	Core 1					
33	Floor unit approximately 2700mm x 600mm x 775mm high	11.	-			
	(size to be confirmed on site), with 32mm formica post-					
	formed worktop counter top etc, all as per Architects Detail	No	2			
		INO	2			
	Core 2				-	
	en de la companya de la companya de la companya de la companya de la companya de la companya de la companya de La companya de la companya de la companya de la companya de la companya de la companya de la companya de la co					
	Carried to Collection			R		
	Section No. 2					
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	Carpentry And Joinery					
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		Unit _I	Quantity	Rate	Amount
		ļ			
34	Floor unit approximately 3000mm x 600mm x 900mm high	1			
	(size to be confirmed on site), with 32mm thick chipboard	(1).			
	post-formed laminated HPL counter top etc, all as per				
	Architects Detail	No	1		
	Core 1				
35	Floor unit approximately 3000mm x 600mm x 775mm high				
	(size to be confirmed on site), with 32mm formica post—				
	formed worktop counter top etc, all as per Architects Detail	N	2		
ŀ	and the second of the second o	No	2		
	Core 2				
36	Floor unit approximately 3100mm x 600mm x 775mm high				
Ì	(size to be confirmed on site), with 32mm formica post- formed worktop counter top etc, all as per Architects Detail				
	formed worktop counter top etc, all as per Architects betain	No	1		
		NO	1		
	Core 1				
37	Floor unit approximately 3250mm x 600mm x 775mm high (size to be confirmed on site), with 32mm formica post-				
	formed worktop counter top etc, all as per Architects Detail				
	joining notice of the same of	No	1		
	0-11 4		İ		
38	Core 1 Floor unit approximately 3290mm x 600mm x 775mm high				
50	(size to be confirmed on site), with 32mm formica post-		1		
ļ	formed worktop counter top etc, all as per Architects Detail				
		No	1		
	Core 1				
39	Floor unit approximately 4000mm x 600mm x 900mm high				
	(size to be confirmed on site), with 32mm thick chipboard				
	post-formed laminated HPL counter top etc, all as per Architects Detail	N1	1		
	Architects Detail	No	1		
	Core 1			.*	
40	Floor unit approximately 4550mm x 600mm x 900mm high				
	(size to be confirmed on site), with 32mm thick chipboard post-formed laminated HPL counter top etc, all as per				
	Architects Detail	No	1		
4.4	Core 1 Floor unit approximately 5725mm x 600mm x 900mm high	*	:		
41	(size to be confirmed on site), with 32mm thick chipboard				İ
	post-formed laminated HPL counter top etc, all as per				
	Architects Detail	No	1		
	Core 1				
	-				
	Carried to Collection			R	
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	Section No. 2				
	Bill No. 7 Carpentry And Joinery				
	Carpentry And Joinery 70				
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1		Unit	Quantity	Rate	Amount
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42	U-shaped top counter floor unit approximately 5000mm x 600 x 365mm (size to be confirmed on site), with 32mm post-formed formica laminated worktop etc, all as per Architects Detail	No	1		
43	Core 1 U-shaped staff counter floor unit approximately 5000mm x 600mm x 775mm high (size to be confirmed on site), with 32mm post-formed formica laminated worktop, including access hatch etc, all as per Architects Detail	No	1		
	Core 1 Worktops:				
44	32mm Thick PG Bison formica lifeseal worktop with 3mm radius square edge with 60mm round tube steel support at predetermined position including all support structures approximately 1400mm x 700mm x 720mm high (size to be confirmed on site), all as per Architects Detail	No	1		
45	Core 1 32mm Thick PG Bison formica lifeseal worktop with 3mm radius square edge with 60mm round tube steel support at predetermined position including all support structures approximately 1760mm x 700mm x 720mm high (size to be confirmed on site), all as per Architects Detail	No	1		
46	Core 1 32mm Thick PG Bison formica lifeseal worktop with 3mm radius square edge with 60mm round tube steel support at predetermined position including all support structures approximately 2079mm x 700mm x 720mm high (size to be confirmed on site), all as per Architects Detail	No	1		
	Core 1 LAPTOP BOOTHS				
	Booths with worktops:				
47	Laptop booth approximately 2060mm x 720mm x 1230mm high (size to be confirmed on site), with 32mm post–formed laminated worktop counter top etc, all as per Architects Details	No	1		
48	Core 1 Laptop booth approximately 2365mm x 720mm x 1230mm high (size to be confirmed on site), with 32mm post-formed laminated worktop counter top etc, all as per Architects	N1.	1		
	Details	No	1		
	Core 1				
	Carried to Collection		!	R	
	Section No. 2				
	Bill No. 7				
	Carpentry And Joinery 71				

ı		Unit	Quantity	Rate	l Amount	
49	Laptop booth approximately 2540mm x 750mm x 1230mm high (size to be confirmed on site), with 32mm post–formed laminated worktop counter top etc, all as per Architects Details	No	1			
50	Core 1 Laptop booth approximately 2860mm x 720mm x 1230mm high (size to be confirmed on site), with 32mm post–formed laminated worktop counter top etc, all as per Architects Details	No	1			
	Core 1					
51	Laptop booth approximately 3665mm x 750mm x 1230mm high (size to be confirmed on site), with 32mm post–formed laminated worktop counter top etc, all as per Architects Details	No	1			
	Core 1 THEATRE SEATING					
	Theatre seat specification: 520/540mm seat centre, 560mm seat depth, 950mm backrest height.					
	BACKREST with cold moulded polyurethane foam (Uniblock 2 system), thickness of seat foam to be 130mm, foam test - UN-EN 1021-1:2006, upholstered in Scenic 2.1 range colour ARC - C/08, fabric to be M1/BS EN 1021-1 - Flammability, fabric 50 000 Martindale Cycles, backrest cover at the back to be varnished solid wood, 1mm, backrest to be round shaped. SEAT to have cold moulded polyurethane foam (Uniblock 2 system), thickness of seat foam to be 130mm, foam test - UN-EN 1021-1:2006, foam must have density of 65kg/m3, upholstered in Scenic 2.1 range ARC-C/08, Fabric must be M1/BS EN 1021-1 - Flammability, Fabric must be 50 000 Martindale Cycles, COVER underneath seat to varnished solid wood, 1mm, seat to have Acoustic Absorption test, seat to have automatic noiseless maintenance-free double spring tilt. LEG PANELS - Bottom of end side panel and shared armrests to be textured polypropylene 40mm, Top part of end side panels to be completely upholstered in Scenic 2.1 range					
	ARC-C/08, Fixation to the floor must be concealed, Seats to have feet that adapts to different slopes/steps. Slope mouldings: between 0% -16%. ARMRESTS to be round-shaped capped with vanished solid wood:					
52	Theatre seat	No	692			
	Core 692					i
	Carried to Collection			R		
	Section No. 2 Bill No. 7 Carpentry And Joinery					
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		Unit	Quantity	Rate	Amount	
	TIMPED LOUVES					
	TIMBER LOUVRES					
	Timber louvres (Provisional):					
53	80mm Thick wooden louvres at 320mm centre to centre manufactured in vertical arrangement, supplied and installed					
	to architects approval including all frames, linkage bars					
	complete as per Architects Detail	m²	56		ļ	
	Core 56					
54	80mm Thick wooden louvres at 320mm centre to centre manufactured in horizontal arrangement, supplied and			,		
	installed to architects approval including all frames, linkage					
	bars complete as per Architects Detail	m²	112			
	Core 112					
55	80mm Thick wooden louvres approximately 3715mm high					
	manufactured, supplied and installed vertically to architects approval including all frames, linkage bars, anchors etc					
	complete as per Architects Detail	m²	224		i	!
	Core 224					
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	Carried to Collection			R		<u> </u>
	Section No. 2					
	Bill No. 7					
	Carpentry And Joinery 73				ļ	
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	BILL NO. 7			
	CARPENTRY AND JOINERY			
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	Section No. 2			
	Bill No. 7 Carpentry And Joinery			
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	Unit	Quantity	Rate	Amount
SECTION NO. 2				
BUILDINGS				
BILL NO. 8				
CEILINGS, PARTITIONS & ACCESS FLOORING (CPAP WORK GROUP NO. 129 UNLESS OTHERWISE				
STATED)				
Key: Location Description:				
Un/A Unallocated Core Core Bldg (Auto)				
Nor North Block				
Sou South Block				
PREAMBLES				
The contractor is referred to the Model Preambles for Trades				
(2008 Edition) as issued by the Association of South African				
Quantity Surveyors before pricing this bill				
SUPPLEMENTARY PREAMBLES				
Note: Supplementary Preambles applicable to trades in the Buildings section will apply equally to all buildings under				
construction on this project.				
Descriptions:				
Items described as "nailed" shall be deemed to be fixed with				
hardened steel nails or pins or shot pinned to brickwork or concrete				
Items described as "plugged" shall be deemed to include				
screwing to fibre, plastic or metal plugs at not exceeding				
600mm centres, and where described as "bolted", the bolts are measured elsewhere				
Ceilings:				
Unless otherwise described ceilings shall be deemed to be				
horizontal				
Steel components:				
All steel components for ceilings, partitions, etc are to be				
galvanised in accordance with SANS 121				
Proprietary suspended ceilings:				
Hangers, suspension grids, "lay-in" panels, etc are to be in accordance with the manufacturers' recommendations				
Carried to Collection			F	
Section No. 2				
Bill No. 8				
Ceilings, Partitions & Access Flooring				
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Where electrical light fittings, diffusers, panels etc are units of the same dimensions as the suspension grid described and allowance must be made in the rates accordingly for their support inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof)					
Suspension systems:					
Where suspensions of ceilings require a sub-grid, the tenderer should include in his rates for the sub-grid. The design of the sub-grid support is not specified, the tenderer is to obtain the necessary requirements and recommendations for a safe installation from the board and suspension system manufacturer to the satisfaction of the structural engineer					
General:					
Tenderers are advised to discuss site security, access to the works, sequences of the work, programme, etc. with the Principal Contractor to ensure that no delays occur					
The descriptions contained in these Bills of Quantities are to be read in conjunction with the drawings and schedule of finishes as prepared by the architects, and are intended as a means of identifying the various facets of the work. Tenderers shall allow for all costs in connection with the various items taking full cognisance of drawings, schedule of finishes, and the Bills of Quantities descriptions					
Tenderers are advised that no site accommodation will be provided for their use. As such tenderers are to allow for this item in their submitted rates, or under the items provided for in the Preliminary & General sections					
Furthermore, tenderers are to study and acquaint themselves with the programme regarding the phasing of the works. No additional claim for re–establishment due to phasing of the works will be entertained	·				
Final measurement of the works shall be made from either the construction drawings or from measurements taken on site to the nearest 0,01m and priced in accordance with the rates contained herein					
Carried to Collection			R		
Section No. 2					
Bill No. 8					
Ceilings, Partitions & Access Flooring					
76				II	I

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	Unit	Quantity	Rate	Amount	
Gyproc Control Joints may be required in certain ceilings to relieve stresses induced by expansion and contraction of the structure. Control joints shall be specified where any of the conditions listed below exist:1. Where excessive movement is likely to occur.2. Where a ceiling traverses movement joints within the surrounding structure. The width of the drywall control joint shall be equal to that of structure. 3. Where the building/substrate structural system/material changes. 4. Interior ceilings with perimeter relief: Control joints shall be installed so that linear dimensions between control joints shall not exceed 15m and total area between control joints does not exceed 225m.5. Exterior ceilings and soffit: Control joints shall be installed so that linear dimensions between control joints shall not exceed 9m and total area between control joints does not exceed 9m and total area between control joints does not exceed 81m².6. A control joint is desired or incorporated as a design accent or architectural feature. Gyptone Rigitone Expansion Joints:1. Gyptone					
Rigitone boards should be cut 10mm short of the perimeter walls and should not be fixed to the perimeter channel					
Descriptions referred to in these Bills of Quantities are intended for REFERENCE PURPOSES ONLY and where discrepancies between the Bill items and the drawings occur, the drawings shall take preference. Such discrepancies shall be qualified by the tenderers and failure to do so shall indemnify the Employer and/or his agents against any additional costs, etc. resulting from such discrepancies					
Bulkheads:					
Bulkheads are defined as those portions of ceilings which are stepped down from the general ceiling level in a particular room or area and which generally occur along the perimeter. Their purpose is either to conceal services or to create architectural features.					
Bulkheads have only been described as such where they conform to the above definition and where the horizontal or vertical dimensions do not exceed 900mm. Where these dimensions are more than 900mm such portions of ceilings have been included in the appropriate general items of ceilings.					
Unless otherwise described bulkheads shall be deemed to be horizontal along the length.					
Steel components:					
All steel components for ceilings, partitions, etc are to be galvanised in accordance with SANS 121.					
Carried to Collection		i		R	
Section No. 2					
Bill No. 8					
Ceilings, Partitions & Access Flooring					
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86					

	Unit	Quantity	Rate	Amount	
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Proprietary suspended ceilings:				·	
Hangers, suspension grids, lay-in panels, etc are to be in accordance with the manufacturers' recommendations.					
Electrical light fittings, diffusers, panels etc are generally lay— in units of the same dimensions as the suspension grid described and allowance must be made in the rates accordingly for their support inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof).					
Flush plastered gypsum plasterboard suspended ceilings:					
The grid shall be suspended by means of galvanised steel L-section hangers at suitable centres, securely shot-pinned or screwed to concrete, steel or wood.					
Flush plastered gypsum plasterboard suspended bulkheads:					
Bulkheads shall comprise galvanised steel studding of 63,5mm top and bottom tracks with vertical studs at maximum 400mm centres, pop-riveted to the top and bottom tracks with similar additional vertical studs as necessary at abutments, ends, etc and covered as described with plasterboard screwed to studding with drywall screws at maximum 300mm centres. Boards shall be butt jointed and finished with tape and jointing compound and the whole finished with gypsum plaster trowelled to a smooth polished surface to the thickness recommended by the manufacturer. Descriptions shall be deemed to include any additional studs at ends and intersections, corner beads, cornices at junctions with ceilings, jointing compound, tape, etc.					
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Carried to Collection			R		
Section No. 2					
Bill No. 8 Ceilings, Partitions & Access Flooring					
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		Unit _I	Quantity	Rate	Amount	ļ
	SUSPENDED CEILINGS					i
	Gyptone® BIG Curve Line 6 6.5 mm (ISO 9001 & 14001 certification) fixed to Gypframe® N Cross Furring Channel using Gyproc Sharp-point Screws 25 mm at maximum 150 mm centres.					
	Gypframe® N Main Bar installed at 1000 mm centres and suspended using Gyproc Galvanised Angle 25 mm x 25 mm hangers at 1000 mm centres.					
	Gypframe® N Cross Furring Channel at 280 mm centres (9 notches) clipped onto Gypframe® N Main Bar.					
	Apply Gyproc RhinoTape® to all joints and internal corners.					
	Install Gypframe® Corner Bead to all external corners.					
	Cover Gyproc RhinoTape® with 2 coats of Gyproc RhinoGlide® (locally manufactured, Greentag Level B).					
	Wall Angle – Fix Gypframe® N Square Wall Angle to the wall					
	using fixings at 300mm centres. Install 50 mm thick non-combustible, lightweight Energylite Glasswool insulation blanket/batts of 47.5 kg/m³ density for improved acoustic performance.					
	Install in accordance with the manufacturers detail and specification					
1	Ceilings suspended not exceeding 1m below concrete soffits	m²	150			
	Core 150					
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	Section No. 2					
	Bill No. 8					
	Ceilings, Partitions & Access Flooring					
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		Unit	Quantity	Rate II	Amount	
	RhinoBoard® 9 mm (locally manufactured, ISO 9001 & 14001 certification, recycled paper content, Greentag Level B) fixed to Gypframe® N Cross Furring Channel using Gyproc Sharp-point Screws 25 mm at maximum 150 mm centres. Gypframe® N Main Bar installed at 1000 mm centres and suspended using Gyproc Galvanised Angle 25 mm x 25 mm hangers at 1200 mm centres. Gypframe® N Cross Furring Channel at 400 mm centres (12 notches) clipped onto Gypframe® N Main Bar. Apply Gyproc RhinoTape® to all joints and internal corners. Install Gypframe® Corner Bead to all external corners. Cover Gyproc RhinoTape® with 1 layer of Gyproc RhinoLite® Multipurpose/ RhinoLite® Natural Plus®/ RhinoLite® CreteStone® (locally manufactured, Greentag Level B). Wall Angle – Fix Gypframe® N Square Wall Angle to the wall using fixings at 300 mm centres. Install 135 mm thick flexible, non-combustible, lightweight Aerolite insulation material between the roof trusses and over brandering/ purlins in a completed roof and ceiling					
	system. Install in accordance with the manufacturers detail and					
	specification:	9	022			
2	Ceilings suspended not exceeding 1m below concrete soffits	m²	933			
	9mm White vinyl covered fibre cement in boards size 600 x 1200mm fixed on suspension grid system including hangers, necessary hold-down clips and wedges, etc:					
3	Ceilings suspended not exceeding 1m below concrete soffits	m²	1 072			
	Nor 542 Sou 530 Opening formed in ceilings in differing materials (Provisional):					
4	Extra over ceiling for opening for 150mm diameter			!		
	downlighter	No	100			
5	Core 100 Extra over ceiling for opening for 250mm diameter downlighter	No	80			
	Core 80					
6	Extra over ceiling for opening for 600 x 600mm light fitting	No	60			
7	Core 60 Extra over ceiling for opening for 600 x 1200mm light fitting	Νo	40			
	Core 40					
	Carried to Collection			R		
	Section No. 2					
	Bill No. 8					
	Ceilings, Partitions & Access Flooring					
	80					
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1		Unit	Quantity	Rate	Amount
8	Extra over ceiling for 600 x 600mm opening for ventilation grille/air conditioning diffuser	No	20	ļ	
	Core 20 SUNDRIES				
	Ceilings trims, etc:				
9	OWA Construct L-trim, plugged and screwed at centres not exceeding 200mm (provisional)	m	875		
10	Core 875 SIGMA Plaster Trim 100 satin white epoxy coated aluminium plaster trim measuring 100 x 100mm shadow reveal with 5/6/36 wall anchors at 450mm centres. Align SIGMA Plaster Trim 100 with 75 x 2,6mm alignment pins and 150 x 20 x 2mm alignment splice plates.	m į	640		
	Core 640 BULKHEADS				
	Bulkheads formed 12.5mm thick gypsum boarding				
	suspended not exceeding 1m below concrete soffits				
	with 25 x 25mm aluminium angle frame with T38 aluminium tees fixed to SIGMA satin white epoxy coated SIGMA 30 aluminium plaster trim with 30 x 30mm shadow reveal at horizontal junction with wall,	·			
:	all in accordance with 5/6/36 wall anchors at 450mm centres aligned with 100 x 200 alignment pins,	٠.			
	with bulkheads built against walls and hence L-shaped unless otherwise described,				
	all to architect's instructions:				
11	300 x 300mm High bulkheads	m	313		
12	Core 76 Nor 96 Sou 141 500 x 300mm High bulkheads	m	51		
13	Sou 51 600 x 300mm High bulkheads	m	320		
14	Core 117 Sou 203 6400mm Diameter irregular shaped feature bulkhead to architect's Detail	No	4		
15	Core 4 9000mm Diameter irregular shaped feature bulkhead to architect's Detail	No	1.		
	Sou 1				
	Carried to Collection			R	
	Section No. 2				
	Bill No. 8			l	
	Ceilings, Partitions & Access Flooring 81				
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		Unit	Quantity ₁	Rate _{II}	Amount	
16	11000mm Diameter irregular shaped feature bulkhead to					
	architect's Detail	No	1			
	Sou 1					
İ	Bulkheads formed of white vinyl covered fibre cement with					
	25 x 25mm aluminium angle frame with T38 aluminium tees					
	fixed to SIGMA satin white epoxy coated SIGMA 30 aluminium plaster trim with 30 x 30mm shadow reveal at					
	horizontal junction with wall, all in accordance with 5/6/36					
	wall anchors at 450mm centres aligned with 100 x 200					
	alignment pins, all to architect's instructions:					
17	300 x 300mm High bulkheads	m	408			
ļ	Nor 322 Sou 86		22			
18	300 x 300mm High bulkheads circular on plan	m	32			
	Nor 32		24	İ		
19	500 x 300mm High bulkheads	m	24			
ļ	Core 24		31			
20	600 x 300mm High bulkheads	m	31			
	Sou 31	m	3			
21	2219 x 3334 x 300mm High bulkheads	""				
	Sou 3	m	15			
22	2500 x 1180 x 300mm High bulkheads	•••				
22	Nor 15 2500 x 3000 x 300mm High bulkheads	m	12			!
23						
	Core 12 <u>Circular</u> bulkheads formed of 12.5mm thick gypsum					
l	boarding 25 x 25mm square section aluminium frame fixed					
	with T38 aluminium tees, 9mm thick gypsum boards, taping					
	and jointing and flush plastered with Rhinolite, all in accordance with architect's instructions:					
2.4	COO malius y 200mm doon	No	1			
24			_			
25	Nor 1 Circular bulkhead, size 1000 radius x 300mm deep	No	2			
25				'		
	Nor 2 Cornices, trims, etc. to flush plastered ceilings (Provisional):					
26			1			
26	coated Interpond D1025 LN205P Matt Jet black Class 1	m	190			
	Core 190					
27	Sigma Shadowline Plaster Trim 20 perimeter trim powder					
	coated Interpond D1025 LN205P Matt Jet black – Class 1					
	(Circular on plan)	m	1 85			
	Core 85					
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	Section No. 2					
	Bill No. 8					
	Ceilings, Partitions & Access Flooring					
	82					

		Unit	Quantity	Rate	Amount
28	25mm Anodised aluminium frame with mitred corners	m	245		
	Core 245 ACOUSTIC CEILINGS				
	OWA Acoustic Brillianto A Fleece Premium biologically absorbable mineral wool ceiling tiles, NRC - 0.90, CAC - 30dB, fire classification A2-s1, d0, weight - 3.5 kg/m², size 1200 x 600x 15mm with Square-edge and white fleece finish, laid on fire rated OWAconstruct S3 exposed demountable T24 suspension system, comprising galvanised main tees and cross tees with main tees suspended by means of galvanised hangers at centres not exceeding 1200mm, and all installed to manufacturer's instructions:				
29	Acoustic ceiling suspended not exceeding 1m below concrete soffits	m²	694		
	Core 192 Sou 502 SUSPENDED TIMBER CEILINGS (PROVISIONAL)				
	Timber ceilings:				
30	Wooden ceiling panels at a PC Sum of R1500.00 per m2 suspended not exceeding 1m below concrete soffit with metal suspension rails and clips all as the architect's instructions	m²	1 103		
	Core 897 Sou 206				
31	Wooden panelled bulkhead, size 300 x 300 with panelling at a PC Sum of R1500.00 per m2 with 25 x 25mm aluminium angle frame with T38 aluminium tees fixed to SIGMA 30 aluminium plaster trim with 30 x 30mm shadow reveal at horizontal junction with wall, all in accordance with 5/6/36 wall anchors at 450mm centres aligned with 100 x 200 alignment pins suspended not exceeding 1m below concrete soffit with metal suspension rails and clips all as the architect's instructions	m	163		
32	Nor 163 Wooden panelled bulkhead of irregular soffit design, size 5000 x 3000 x 300mm deep with panelling at a PC Sum of R1500.00 per m2 25 x 25mm aluminium angle frame with T38 aluminium tees fixed to SIGMA 30 aluminium plaster trim with 30 x 30mm shadow reveal at horizontal junction with wall, all in accordance with 5/6/36 wall anchors at 450mm centres aligned with 100 x 200 alignment pins suspended not exceeding 1m below concrete soffit with metal suspension rails and clips all as the architect's instructions	No			
	Nor 1				
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	Carried to Collection			K	
	Section No. 2				
	Bill No. 8 Ceilings, Partitions & Access Flooring				
	83				

		Unit _l	Quantity	Rate 👭	Amount	
	ACOUSTIC LININGS					
	Acoustic wall linings					
33	Idealux FL acoustic wall panel, size 2400 x 600mm comprising oak Melamine panel fixed to black polyester fibre panel with high acoustic performance, slats at 13 x 27mm with a 13mm separated at 68mm with batten height 22/42mm, fixed to L-shaped metal bracket attached to wall surface with screws to create a 40mm cavity for and including Energylite IM475 (40mm) insulation with perimeter edge closure, all in accordance with manufacturer's instructions	m²	5 352			
		111	3332			
34	Core 5352 Ditto acoustic wall panels fixed <u>circular on plan</u> to plastered walls in accordance with manufacturer's instructions	m²	665		i	
	Nor 448 Sou 217 Idealux FL Wall Panel, size 2400 x 600mm dimensions, Oak Melamine panel fixed with wood screws on to 40 x 40mm battens (6 wooden screws per panel) all fixed to 9mm black polyester fibre panel with high acoustic performance, slats at 13 x 27mm with a 13mm gap, separation of 68mm. Batten height at 22/42mm. To be fixed to L shape metal bracket to wall surface with screws to create a 40mm cavity for Energy life IM475 (40mm) insulation included. Perimeter edging to be advised:					
35	Wall panelling (Provisional)	m²	200			
	Core 200					
36	Vertical portion of bulkheads 300mm high including all stabilising sections and edge, suspended not exceeding 1m below concrete soffits (Provisional)	m	150			
ŀ	Core 150					
37	Vertical portion of bulkheads 300mm high including all stabilising sections and edge, suspended not exceeding 1m below concrete soffits circular on plan (Provisional)	m	150			
	OWAcoustic premium HDF/MDF wood effect panels with perforations and HDF panes on rear with anodised 25mm aluminium frame (measured elsewhere) drilled for wall mounting to suppliers specification:					
38	On walls (Provisional)	m	120			
	Core 120			ļ i		
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	Ceilings, Partitions & Access Flooring					
	84		İ			

		Unit	Quantity	Rate	Amount
	High level suspended curved acoustic panels:				
39	Curved acoustic panel suspended exceeding 5 and not exceeding 7.5m below concrete soffits, size 3700mm wide comprising gypsum plasterboard fixed to curved top cross rail with resilient mount sand suspension rods, brackets and supports suspended 5 and not exceeding 7.5m below steel roof trusses, all as per Architect's Detail A on LPT Section A–A	m	166		
	Core 166				
	CURTAINS				
	Stage curtains:				·
40					
40	Gaudi colour Mohair of 575 g/m3 weight, in widths of 1400mm with top finishes of webbing, grommets and ties, bottom finishes of flat hem and hemmed sides finishes in wag				
	and fly French opening pattern	m	48	•	
41	Core 48 Scenery curtain 10 800mm high to architect's approval, in widths of 1400mm with top finishes of webbing, grommets and ties, bottom finishes of flat hem and hemmed sides				
	finishes in wag and fly French opening pattern	m	144		
	Core 144				
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	Bill No. 8				
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CEILINGS, PARTITIONS & ACCESS FLOORING				
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Ceilings, Partitions & Access Flooring				
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	Unit	Quantity	Rate	Amount
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SECTION NO. 2				
BUILDINGS				
BILL NO. 9		,		
FLOOR COVERINGS				
(CPAP WORK GROUP NO. 130 UNLESS OTHERWISE				
STATED)				
Key: <u>Location Description:</u>			:	
Un/A Unallocated Core Core Bldg (Auto)				
Nor North Block				
Sou South Block				
PREAMBLES				
The contractor is referred to the Model Preambles for Trades (2008 Edition) as issued by the Association of South African				
Quantity Surveyors before pricing this bill				
SUPPLEMENTARY PREAMBLES				
Note: Supplementary Preambles applicable to trades in the				
Building section will apply equally to all buildings under				
construction on this project.				
Fixing:				
Floor coverings, wall linings, etc shall, where applicable, be		!		
fixed with adhesive as recommended by the manufacturer's of the flooring, linings, etc.				
Floor coverings:				
Floor coverings, wall linings, etc shall, where applicable, be				
fixed with adhesive as recommended by the manufacturers of				
the flooring, linings, etc		!		
Carpet tiles Belgotex "BALTIMORE" 4m broadloom				
manufactured from Stainproof SDX & Stainproof Eco SDX Blend (Solution Dyed Nylon). This product is to be laid in				
accordance with the SANS 10186 fitting code of practice laid				
in accordance with the manufacturers instructions				
1 On concrete floors	m²	1 622		
Core 1510 Sou 112				
2 On timber floors	m²	525		
Core 525	_			
On treads and risers	m²	180		
Core 180				
			_	
Carried to Collection			R	
Section No. 2				
Bill No. 9				
Floor Coverings				
87		ŀ	I	п

		Unit i	Quantity	Rate	Amount i
	γi .				
	Belgotex Accelerate 50x50cm tiles manufactured from Stainproof SDX (Solution Dyed nylon-6 for extreme conditions) laid in accordance with the manufacturers instructions and the SABS 0186-2000 fitting code of practice:				
4	On concrete floors	m²	300		
	Core 300 Polyurethane foam puzzle tile 930 x 930mm approximately 1.5% rubber floor finish or similar approved:				
5	On concrete floors	m²	200		
	Core 200 FLOOR COVERINGS				
	Polyurethane foam puzzled 930 x 930mm, $(+/-1.5\%)$ rubber floor finish or similar approved:				
6	On floors	m²	62		
	Sou 62 Sikafloor - Tele grey RAL 7045 or similar approved:			:	
7	On floors	m²	62		
	Core 62 MATS (PROVISIONAL)				
	COBA Africa Plan A entrance matting system with 17mm standard profile height, closed construction surface type with PVC brushes and PVC scraper combination inserts, (Product Code: PLANAA0016) This product is to be laid in accordance with the SANS 10186 fitting code of practice laid in accordance with the manufacturers instructions:				
8	On floors	m²	20		
	CORE 20 COBA Africa Plan A entrance matting system with 10mm low profile height, closed construction surface type with alba inserts, (Product Code: PLANAA0002) This product is to be laid in accordance with the SANS 10186 fitting code of practice laid in accordance with the manufacturers instructions:				
9	On floors	m²	12		
	Core 12 SUNDRIES				
	Sundries (Provisional):				
10	12mm Expansion gap with Plastazote strips	m	200		
į	Core 200		:		
	Carried to Collection			R	
	Section No. 2				
	Bill No. 9				
	Floor Coverings 88				
		'	'		•

		Unit _]	Quantity	Rate	Amount
11	30mm Wide expansion gap with Plastazote strips	m	140		
12	Core 140 50 x 50 x 6mm steel edge	m	66		
	Core 66 NOSINGS				
	Stair nosings:				
13	50mm Aluminium stair nosing with rubber inserts, to architect's approval, screwed to concrete	m	509		
	Core 509				
		:			
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	Section No. 2 Bill No. 9				
	Floor Coverings				
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BILL NO. 9				
FLOOR COVERINGS				
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Bill No. 9				
Floor Coverings				
	90			

1			Unit	Quantity	Rate	Amount	
	SECTION NO. 2			8			
	BUILDINGS			ı			
	BILL NO. 10						
İ	IRONMONGERY						
		Location Description: Unallocated	-	Ì			
ļ		Core Bldg (Auto)					
Ì		North Block					
ļ	Sou	South Block					
	PROVISION FOR IRC	<u>DNMONGERY</u>				•	
	The contractor will be	issued an Ironmongery Schedule and					
	is to obtain three quo	tations from approved suppliers, add					
	labour and other cost	s and submit to the P:rincipal Agent or a full set of rate buildups. Ordering			i		
	of materials and exec	ution of work is only to proceed after					
	written instruction is	received from the Principal Agent:					
Ĺ	Provide the sum of R63	0 000.00 (Six Hundred and Thirty		,			
	Thousand Rand) for in	stallation of ironmongery.	ltem				
	Core 1						
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	Section No. 2						
	Bill No. 10						
	Ironmongery	91					
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	Unit	Quantity	Rate	Amount
SECTION NO. 2				
<u>BUILDINGS</u>				
BILL NO. 11				
STRUCTURAL STEELWORK (PROVISIONAL)				
Key: Location Description:				
Un/A Unallocated Core Core Bidg (Auto)				
Nor North Block				
Sou South Block				
PREAMBLES				
The contractor is referred to the Model Preambles for Trades				
(2008 Edition) as issued by the Association of South African Quantity Surveyors before pricing this bill				
SUPPLEMENTARY PREAMBLES				
Note: Supplementary Preambles applicable to trades in the				
Building section will apply equally to all buildings under construction on this project.				
Descriptions:				
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				
STRUCTURAL STEEL TESTING SPECIFICATIONS		!		
Overview:				
Quality control checks must be done on all structural steel members which addresses all the elements of ISO 9002: 1994 and SANS/ISO 9001: 2008				
All welding procedures, tests, qualifications and production welds should comply with the latest revision of the American Welding Society standards, code AWS D1.1				
The majority of weld testing and inspection can be separated into two categories: Destructive Testing, and Non-Destructive Commonly used methods are:				
Non-Destructive Testing:				
There are numerous methods of NDT, some are reasonably simple, but others require specialist operators and expensive equipment, such as X-ray testing (for Butt Welds) and Magnetic Particle Inspection, MPI (for Fillet Welds).				
Carried to Collection			R	
Section No. 2				
Bill No. 11				
Structural Steelwork (provisional)				
92				

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	Unit	Quantity	Rate	Amount
here are also more simple methods such as dye penetrant				
esting, which can be carried out with minimal equipment,				
and in most workshops.				
Destructive testing:				
Destructive testing is usually a cheaper method of inspection. It lends its self to mass produced parts, where sacrificing one				
or two components for testing is acceptable. It is quite useful				
or setting up welding equipment. It is also a good learning ool during training courses, as it allows the students to do				
ots of testing at minimal cost, and is often easier to				
inderstand than some of the NDT methods. The two most ommon tests used in training are Macro Etch testing, and				
toot and Face bend testing.				
oad testing:				
load test on this part of the structure may be required on			.	
ertain welds to check for consistency.				
esting of welds:				
ray testing for Butt welds, 100% for all critical welds as dentified by the Structural Engineer and 10% for the rest of				
he welds				•
Magnetic Particle Inspection (MPI) for fillet welds				
<u>SENERAL</u>		Ì		
hop Drawings:			:	
hop drawings must be thoroughly checked by the engineer				
or compliance with the original engineering drawings and nust contain all details relevant to fabrication and erection.				
General arrangement drawings should show centroidal axes				
nd centrelines of structural members.				
Io fabrication or erection should take place before the				
elevant drawings have been approved by the engineer.			:	
ISSE Requirements:				
rovide an overall Health and Safety Specification and ensure he Principal Contractor's OHS programme is implemented.				
OQ Requirements:				
he BOQ requirements are as follows:				
he Contractor must allow in his tender for:-				
) Temporary struts and bracing during erection.				
) Workshop drawings.			.	
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tructural Steelwork (provisional)				

	Unit	Quantity	Rate	Amount	1
c) X-ray testing for welded connections, will be required by the Structural Engineer.	:				
Steel mass will be calculated according to the tables issued by the SA Institute of Steel Construction.					
Note:					
The Contractor shall be responsible for preparing fabrication/shop drawings. The Structural Engineer will require a minimum of 5 working days for approval of the drawings prior to fabrication.					
The Contractor shall be responsible for final verification of all steel work dimensions before manufacturing any component on or off site.					
The Contractor shall be responsible for submitting a method statement to the Structural Engineer for the erection of the steel work together with the programme of works.					
All steelwork must comply with the following:					
All material and workmanship must comply with the latest SANS 1200H					
All steel work to be grade S355JR unless cold formed.					
All welding is to be done by or under supervision of the coded welders.					
All welds are to be 6mm continuous fillet welds unless noted otherwise.					
No punching of holes will be permitted					
Flame cutting of holes on new members will not be permitted					
Flame cutting of holes on/or existing steelwork will not be permitted without the Structural Engineer's prior permission.					
Test certificates of steel used for the works will be requested for by the Structural Engineer				į	
Steelwork Surface Protection:					
All steelwork is to be in compliance with the Engineer's drawings and to be hot dipped galvanized where specified					
Surface Protection to use the latest ISO 1461 which is the 2022 version					
SUPPLEMENTARY PREAMBLES					
The Structural Steelwork shall be in accordance with the engineer's "STANDARD SPECIFICATION FOR STRUCTURAL STEEL" appended hereto as "Structural Steel Annexure A"					
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Bill No. 11					
Structural Steelwork (provisional)					
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	Unit	Quantity	Rate	Amount	1
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The Contractor is to notify the Principal Agent immediately if a conflict between the specification, architectural drawings or these bills of quantities are found					
Steelwork are measured to the designed sizes of the components					
The price for steelwork shall include all rolling margin, distance pieces, packings, additional material in welding and fixing steel members, decorative or protective and temporary aids; these shall be deemed included in the descriptions of the relevant steelwork. The price for steelwork shall also include for the preparation of all shop detail drawings as defined in the preambles and the engineering specification. The price for steelwork shall include all welding, holes, bolts, nuts, washers, rivets, bolting and riveting integral with structural steelwork as well as all required weld and strength testing, these shall be deemed included in the descriptions of the relevant steelwork.					
The only bolts and anchors measured separately shall be those fixing the steel members to the structural concrete work. For clarity; fixing structural steelwork members to each other is deemed included in the description of the steelwork and has thus not been measured separately and should be priced within the steelwork rates					
Descriptions of bolts shall be deemed to include nuts and washers					
Descriptions of 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	,				
All structural steelwork rates shall include the factory coat of paint only, all repair—, other— and final paintwork to structural steel members are included under a "Painting" heading in these Structural Steelwork bills of quantities					;
Fire rating					
Fire rating of the structure is a s per the fire design of the fire engineer and architect and to a minimum rating as per SANS 10400 Part T. This project is Category H3 with a minimum fire rating of 60 minutes					
Workshop fabrication drawings					
Carried to Collection			R		
Section No. 2	,				
Bill No. 11 Structural Steelwork (provisional)					
95					

	Unit,	Quantity	Rate	Amount	1 162-41 116
The contractor is to submit fabrication drawings for all design and supply items to the engineer for review prior to start of construction of these items. The contractor is to allow 5 working days for review of fabrication drawings					
<u>Trade names</u>					
Where manufacturer's products are specified and equivalent alternative product may be used after prior written approval from the engineer. A full specification document of the alternative product is to be provided					
Fabrication and erection					
All structural steelwork is to be fabricated and erected in accordance with BS 1821, SANS 2001–CS1 and the project specification	:	·			
Steel grades					
All structural steelwork shall have a minimum yield stress as set out below:					
a) Plates and hot rolled sections: S355JR					
b) Hollow sections: S355					
c) Cold rolled sections: Commercial (minimum 200MPa yield stress)					
d) Angles up to 50 x 50mm size san be commercial grade (minimum 200MPa yield stress)					
Splicing and connections					
If splices are required in members for transport or fabrication constraints, proposals are to be submitted to the engineer for approval prior to fabrication commencing					
All connections are to have plates, welds, bolts or anchors as specified by the engineer. Alternative anchors may be used if approved by the engineer					
Minimum edge distance and spacing of bolts are to be as SANS 10612 unless otherwise noted. Mechanical and chemical anchors are to have minimum edge distances and spacings as required by the manufacturer for specified loads					
Welding to comply with AWS D1.1–90 specification and to be carried out by certified welders. On site fillet welding is permitted but it to be kept to a minimum					
Corrosion protection					
Corrosion protection is to be as follows unless otherwise described or noted:					
a) Above ground concealed: Type – IC					
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Structural Steelwork (provisional)					
96		ļ		I	

ı		Unit	Quantity	Rate	Amount
	b) Above ground visible internal: Type – IV				
	c) Above ground visible external: Type – ED				
	d) Underground: 45mm concrete encasement or Type-EET paint system				 - -
	STEEL COLUMNS AND BEAMS				
	Welded and bolted columns and beams in single lengths with flat base, cap, bearer and connection plates				·
1	203 x 133 x 25kg/m Universal beam section column	Tonnes	1.10		
2	Un/A 1.1 219 x 4,0mm Thick circular hollow section steel post	Tonnes	1.50		!
	Un/A 1.5				
	STEEL ROOF TRUSSES				
	Welded lattice roof trusses of square hollow section rafters, tie beams, rails, struts, braces, cleats, etc and flat section bearer, gusset and connection plates, bolted to steel				
3	Truss Type 1	Tonnes	2.16		
	Un/A 2.16				
4	Truss Type 2	Tonnes	7.46		
5	Un/A 7.46 Truss Type 3	Tonnes	1.76		
٦	Un/A 1.76	TOTATES	21,75		
6	Truss Type 4	Tonnes	6.20	:	
7	Un/A 6.2 Truss Type 5	Tonnes	2.64		
8	Un/A 2.64 Truss Type 6	Tonnes	9.24		
9	Un/A 9.24 Truss Type 7	Tonnes	6.48		
	Un/A 6.48				
10	Truss Type 8 Un/A 1.42	Tonnes	1.42		
11	Truss Type 9	Tonnes	6.62		
	Un/A 6.62 STEEL RAFTERS				
	I-Beam rafters:				
	IPE 200 rafters	Tonnes	4.18		
	Un/A 4.18	-			
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13	200 x 75mm Parallel flange channel rafters	Tonnes	0.83			
14	Un/A 0.83 203 x 166 x 30kg/m Rafter	Tonnes	9.30			
14	•	I OHINGS	0			
15	Un/A 9.3 254 x 146 x 37kg/m Rafter	Tonnes	2.42			
	Un/A 2.42					
16	305 x 165 x 40kg/m Rafter	Tonnes	4.93			
	Un/A 4.93					
17	356 x 171 x 45kg/m Rafter	Tonnes	6.38			
	Un/A 6.38	•				
	GALVANISED STEEL PURLINS, GIRTS, BRACING					
	Galvanised purlins and girts, bolted to cleats:					
18	89 x 4.0mm Thick circular hollow section bottom chord tie	Tonnes	12.33			
	Un/A 12.33					
19	200 x 75 x 20 x 2.5mm Cold formed lipped channel section					
	purlins	Tonnes	38.74			
	Un/A 38.74					
	Bracing and anti-sag rails with flat connection plates, welded and bolted					
20		Tonnes	20.83			
20		ionnes	20.00			
21	Un/A 20.83 60 x 60 x 6mm Angle section knee bracing	Tonnes	4.95			
	Un/A 4.95	•				
22	80 x 80 x 8mm Angle section roof bracing	Tonnes	15.06			
	Un/A 15.06					
	ENTRANCE CANOPY					
	Hot dipped galvanised mild steel support members fixed to					
	brickwork and concrete:					
23	285 x 285 10mm Square hollow section column	Tonnes	5.50			
	Un/A 5.5					
24						
	purlins circular on plan	Tonnes	9.44			
	Un/A 9.44	Ta	22.20			
25		Tonnes	22.30			
ā	Un/A 22.3	* 4				
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	GALVANISED BOLTS AND FASTENERS				
	Galvanised bolts to columns and beams				
26	High tensile M20 anchor bolt with nuts and washers (grade 4.8) 1270mm long, bent twice to form U-bolt including 135mm thread on both ends embedded in top of concrete columns.	No	356		
27	Un/A 356 M24 Chemical anchor 200mm long with two washers, including drilling and bolting	No	652		
	Un/A 652 TESTING				
	Testing of structural steel:				
28	X-Ray testing of structural steelwork and steel joints as prescribed by the structural engineers	ltem			
	Core 1 GALVANISED STEEL ELEVATED WALKWAYS				
	Elevated steel walkways exceeding 5m and not exceeding 7.5m high:	-			
29	Support to walkways comprising parallel channel and angle sections welded, bolted and suspended from steel roof		H 70		
	trusses	Tonnes	5.72		
30	Un/A 5.72 40 x 6000mm Wide banded RS40 hot dipped galvanised grating bolted	m	185		
	Un/A 185	,	4.		
	GALVANISED RAINWATER GUTTERS AND DOWNPIPES				
	1mm Galvanised sheet steel gutters and rainwater pipes with powder coated finish on outside:	1			
31	350 x 400 x 350mm VHV roof gutters fixed to purlins at 2000mm centres with heavy duty stainless steel brackets	m	379		
32	Un/A 379 Extra over gutter for stopped end	No	22		
33	Un/A 22 Extra over gutter for angle	No	4		
34	Un/A 4 Extra over gutter for outlet for 200mm diameter pipe	No	30		
	Un/A 30				
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35		m	344			
36	Un/A 344 Extra over rainwater pipe for bend	No	63			
37	Un/A 63 Extra over rainwater pipe for shoe	Ν̈́ο	30			
38	Un/A 30 Extra over rainwater pipe for eaves or plinth offset	No	30			
39	Un/A 30 Spreader for 200mm pipe 600mm long	No	9			
	Un/A 9					
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	Bill No. 11 Structural Steelwork (provisional)					
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Bill No. 11 Structural Steelwork (provisional)			
Structural steel work (provisional)			

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SECTION NO. 2					ŀ
BUILDINGS					
BILL NO. 12					
<u>METALWORK</u>					
(CPAP WORK GROUP NO. 136 UNLESS OTHERWISE					
STATED)					
Key: Location Description:					
Un/A Unallocated Core Core Bldg (Auto)					
Core Core Bldg (Auto) Nor North Block					
Sou South Block					
PREAMBLES					
The contractor is referred to the Model Preambles for Trades					
(2008 Edition) as issued by the Association of South African					
Quantity Surveyors before pricing this bill					
SUPPLEMENTARY PREAMBLES					
Note: Supplementary Preambles applicable to trades in the					
Building section will apply equally to all buildings under					
construction on this project.					
Descriptions:					
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. Descriptions to include					
all powder coated aluminium frames, subframes, weather					
seals, aesthetic seals, fixings, brackets, weather angles,					
flashings, insulation, glazing and protection					
Fenestration:					
This is a design, supply and install contract based on the					
contract drawings that indicate the design intent, including					
the Architects drawings and details. Design and supply responsibilities: Architect – Concept design – Preparation of					
concept drawings, sketches, etc. – Review of the contractor's					
shop drawings- Inspection of fabrication and installation on a					
sample basis. Shopfront contractor – Detailed design, shop					
detailing, procurement, fabrication, assembly, setting out and					
installation – Carry out of testing and sourcing of samples–					
Perimeter seals against adjacent concrete or brickwork-					
Quality control					
Carried to Collection			R		
Section No. 2					
Bill No. 12					
Metalwork					1

	Unit	Quantity	Rate	Amount	
Generally All contractors executing the aluminium work must be "AAAMSA" registered members The drawings issued with this document do not necessarily contain all the information which may be relevant to this contract and the tenderer is advised to visit the offices of the Architect, by appointment and study all drawings related to this contract. No claim whatsoever will be entertained should the tenderer fail to heed this advice					
Rates for glazed aluminium internal shopfronts shall include for the following:	i				
(a) All design including proof of conformance/ compliance with specifications and the furnishings of required tests/ guarantees.					
(b) Provision of all fixed / opening lights/sashes, fittings, hinges, seals and glazing beads					
(c) All ironmongery as implied and specification					
(d) Glazing complete in accordance with SANS 10400–N, SANS 10400–XA					
(e) All costs with regards to the Employment of a professional engineer who is fully responsible for the design of the internal shopfronts installation together with all support work as necessary					
(f) Provision of a waterproofing guarantee					
(g) Completion of a design indemnity letter provided by the Architect					
(h) Provision of shop drawings for Principal Agent / Architect's approval					
(i) Approval by the Architect of the aluminium profile and colour sample prior to manufacturing			·		
(j) Allowance in design for tolerances to cater for expansion and contraction of aluminium					
(k) Fixing complete into preformed openings					
(I) Sealing all joints between aluminium sections and wall, floor and ceiling finishes on both sides with sealant that is compliant with the Specification and leave joints perfectly watertight					
(m) Suitably protecting all exposed surfaces by an approved method such protection is to be removed at completion of the contract and all work is to be cleaned down and left perfect					
Carried to Collection			R		
Section No. 2					
Bill No. 12					
Metalwork 102					

	Unit	Quantity	Rate	Amount
n) Contractor to provide Architect with guarantee for vorkmanship provided				
he quantities have been measured on an overall basis taking nto account that the drawings will be issued to the tenderers nd tenderers will be producing their own designs ccordingly the measurements are not in accordance with ne Standard System of measurement				
he simplified overall basis of measurement applied herein is ntended to provide a basis for tenders to be based upon the ame basic quantities and for final measurement and aluation of the works as executed				
is, furthermore, the only basis of measurement upon which nal remeasurement and valuation will be made				
tenderers require any additional items to be measured or aken into account in remeasurement they are to set these ut at the end of this Bill in the space provided and include ne cost in their tender. Tenders and rate will be assumed to include all sundry items and everything necessary for the completion of the work in accordance with the intent of the esign				
ontractor shall supply all scaffolding, hoisting and cranage ecessary				
enderers are referred to the following Architect's drawings nd details, annexed to these bills of quantities for tender urposes and to be read in conjunction with these bills of uantities				
Netal / Glass Balustrading:				
his is a design, supply and install contract based on the ontract drawings that indicate the design intent, including the Architects drawings and details Design and supply esponsibilities: Architect – Concept design– Preparation of oncept drawings, sketches, etc. – Review of the contractor's hop drawings– Inspection of fabrication and installation on a sample basis. Metal / Glass Balustrading contractor – Detailed esign, shop detailing, procurement, fabrication, assembly, etting out and installation – Carry out of testing and sourcing f samples– Quality control				
ienerally The drawings issued with this document do not ecessarily contain all the information which may be relevant to this contract and the tenderer is advised to visit the offices of the Architect, by appointment and study all drawings elated to this contract. No claim whatsoever will be intertained should the tenderer fail to heed this advice				
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ection No. 2				
ill No. 12 Netalwork				II .

	Unit	Quantity	Rate	Amount
(e) Completion of a design indemnity letter provided by the Architect				
(f) Provision of shop drawings for Principal Agent / Architect's approval				
(g) Approval by the Architect of all samples prior to manufacturing				
(h) Allowance in design for tolerances to cater for expansion and contraction			*.	
(i) Secure fixing complete to floors, walls, etc.				
(j) Suitably protecting all exposed surfaces by an approved method such protection is to be removed at completion of the contract and all work is to be cleaned down and left perfect				
(k) Contractor to provide Architect with guarantee for workmanship provided				
Rates for metal / glass balustrading shall include for the following:		ļ	-	
(a) All design including proof of conformance/ compliance with specifications and the furnishings of required tests/ guarantees.	. :			
(b) Design in accordance with the following SANS regulations: SANS 10104SANS 10400 PARTS A, B, D, N, S, & SANS 10160–2 & 10160–3SANS 10137SANS 10263–1				
(c) Upon completion and testing, issue of SANS 10400–A FORM 3 document by the responsible party.				
(d) All costs with regards to the employment of a professional engineer who is fully responsible for the design of the metal / glass balustrading, should this be necessary.				
If tenderers require any additional items to be measured or taken into account in remeasurement they are to set these out at the end of this Bill and include the cost in their tender. Tenders and rate will be assumed to include all sundry items and everything necessary for the completion of the work in accordance with the intent of the design				
Descriptions:				1
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 Descriptions to include all aesthetic seals, fixings, brackets and protection				
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Section No. 2				
Bill No. 12				
Metalwork				
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		Unit	Quantity	Rate	Amount
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Dimensions:					
	tana an alsa kastana				
The contractor is to check dimens manufacturing any metalwork ite					
Burglar bars:					
Galvanised mild steel burglar bar strict accordance with the scheduall steelwork to be grade 300 W arequirements of SABS 1431 with responsible for final verification oprior to manufacturing of any coland hot dip galvanising to ISO 14 and steel articles.	iles and detail drawings with and comply with contractor to be solely of steel work dimensions mponents on and off site				
Aluminium windows:					
Aluminium windows, doors, shop	fronts and viewing panels				
are to be in accordance with the 'as set out in the documentation i	Window and Door Schedules				
All aluminium frame and glazing v AAAMSA performance criteria AC SANS 10160, SANS 10137, SANS 1 all in accordance with AAAMSA S Aluminium Architectural Alumini), glazing in accordance with 0400 (Part N of Section 3), election Guide for Glazed				
Windows to be natural anodised (NBR and SABS codes, applicable) to manufacturer's specifications. manufactured and installed by remembers only and must have the Performance Certification for the applicable to this project. Contractertificates.	. Windows to be installed Aluminium to be gistered A.A.A.M.S.A appropriate AAMSA Test specific types of windows				
A first off sample is to be approve mark for the project. Manufactur issue to architect on first off sign AAAMSA test certificate to be iss Windloading of a minimum of 15 accordance with SANS 613.	er's metal certificate to be -off. A manufacturers ued to architect.				
Unless otherwise stated all glass 17,5kg/m2 laminated clear safety 10160/10; 10137/02; 10400/10 (p Glass in doors and side lights to b glass. Glass to bathroom window glass to architects approval.	glass as per SANS part N of sec 3); 1263–1/06. e 6.38mm laminated safety				
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Section No. 2					
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١		Unit	Quantity	Rate	Amount	
	Window protection during construction:					
	All windows are to have a plastic covering with a low-tak adhesive covering during building process for protection against scratches and other damage. To be removed on architects approval.					
	Aluminium shopfronts:					
	New purpose made Clip 15 aluminium Shopfront System or other approved is to be used for this project. A first off sample is to be approved and will set the bench mark for the project. Manufacturer's metal certificate to be issue to architect on first off sign-off.					
	A manufacturers AAAMSA test certificate to be issued to architect. Windloading of 1.0KN/m shall be allowed for in accordance with SANS 613.					
	Shopfronts to be natural anodised aluminium as per schedule (NBR and SABS codes, applicable). Shopfronts to be installed to manufacturer's specifications. Aluminium to be manufactured and installed by registered A.A.A.M.S.A members only and must have the appropriate AAMSA Test Performance Certification for the specific types of shopfronts and stackable doors applicable to this project. Contractor to supply compliance certificates.					
	Aluminium doors:					
	Aluminium windows, doors, shopfronts and viewing panels are to be in accordance with the Window and Door Schedules as set out in the documentation issued to all tenderers.					
	All aluminium frame and glazing work to comply with AAAMSA performance criteria AO, glazing in accordance with SANS 10160, SANS 10137, SANS 10400 (Part N of Section 3), all in accordance with AAAMSA Selection Guide for Glazed Aluminium Architectural Aluminium Products.					
	All Aluminium doors to be as per schedules and comply with NBR and SABS codes. Aluminium doors to be installed to manufacturer's specifications, complete with stepped damp proof membrane and required sealant externally. Aluminium to be manufactured and installed by registered A.A.A.M.S.A members only and must have the appropriate AAMSA Test Performance Certification for the specific types of doors applicable to this project. Contractor to supply compliance certificate.					
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	Section No. 2					
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		Unit _I	Quantity	Rate	Amount	
	Extruded aluminium system to comply with code EN 755:2008, alloy 6063 T5 (size 2x double doors to fit shop front) extruded aluminium shopfront double door comprising CL051 hinged stiles and top rail; 2xCL051 lock rails; and CL056 (150mm) bottom rail; all in accordance with SABS standards and P.W. codes of practice as per document PW 371 A & B.					
	Glass in doors and side lights to be 6.38mm laminated safety glass unless otherwise specified.	•				
İ	Door protection during construction:					
	All glazed doors to have a plastic covering with a low-tak adhesive covering during building process for protection against scratches and other damage and only to be removed on architects approval.					
	STAINLESS STEEL HANDRAILS AND BALUSTRADES					
	Glass Balustrade Type 1 - 1100mm high above finished floor level formed of 15mm thick Tempered Clear Glass panels, or as calculated by glass balustrading specialist in panels of equivalent width to suit situation, with 50mm gap between panels, with all exposed edges polished, including 50mm Grade 316 Stainless Steel Post in between glass panels side mounted with Grade 316 stainless steel bracket, including 60mm diameter grade 316 stainless steel handrail held by stainless steel brackets fixed on steel post at 1500mm centre to centre					
1	Glass balustrade Type 1, fitted complete	m	352			
2	Core 352 Circular on plan glass balustrade Type 1, fitted complete	m	105			
3	Core 105 Raking glass balustrade Type 1, fitted complete	m	81			
4	Core 81 Extra over glass balustrade Type 1 for closed end	m	8			
5	Core 8 Extra over glass balustrade Type 1 for right hand corner intersection	m	10			
6	Core 10 Extra over balustrade Type 2 for intersection of raking and horizontal	m	4			
	Core 4					
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	Bill No. 12					
	Metalwork					
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1		Unit	Quantity	Rate	Amount
	Metal Balustrade Type 2 - 1060mm high overall, above finished floor level, formed of 60mm nominal diameter grade 316 stainless steel handrail. The balusters, at necessary equidistant centres to suit situation, formed of 50mm nominal diameter grade 316 stainless steel posts. The eight horizontal rails beneath the handrail formed of 19mm diameter grade 316 stainless steel horizontal rails solid circular sections welded to balusters at both ends. The 50mm grade 316 stainless steel post welded to and including 200 x 40 x 10mm thick grade 316 stainless steel plates with similar finish, at necessary centres to suit situation, twice drilled, for connection to balusters, including stainless steel dome headed connecting bolts:				
7	Metal balustrade Type 2, fitted complete	m	27		
	Core 27				
8	Raking metal balustrade Type 2, fitted complete	m	66		
	Core 66 Raking circular on plan metal balustrade Type 2, fitted				
9	complete	m	20		
	Core 20				
10	Extra over balustrade Type 2 for closed end	m	8		
11	Core 8 Extra over balustrade Type 2 for right hand corner				
	intersection	m	8		
	Core 8			i	
12	Extra over balustrade Type 2 for Intersection of raking and horizontal		4		
		m	4		
	Metal Balustrade Type 3 - 1000mm high overall, above finished floor level, formed of 60mm nominal diameter grade 316 stainless steel handrail, welded to and including 30 x 3mm thick grade 316 stainless steel cut, mitred and welded angle bracket with similar finish, at necessary centres to suit situation, together with 40 x 80 x 3mm thick grade 316 stainless steel cover plate with similar finish as indicated on Architect's drawing, fixed to wall to Architect's approval				
13	Grade 316 stainless steel handrail balustrade Type 3, fitted complete	m	39		
14	Core 39 Raking grade 316 stainless steel handrail balustrade Type 3, fitted complete	m	145		
	Core 145				
	Carried to Collection			R	
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	Bill No. 12				
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		Unit _l	Quantity	Rate	Amount
				ŀ	
15	Extra over grade 316 stainless steel handrail balustrade Type				
	3 for closed end	m	4		
	Core 4				
16	Extra over grade 316 stainless steel handrail balustrade Type				
	3 for right angle corner intersection	m	20	ľ	
	Core 20		•		
17	Extra over grade 316 stainless steel handrail balustrade Type				
- '	3 for knee or ramp intersection of raking and horizontal	m	20		
	Core 20 Theatre timber balustrade Type 4 - constructed of various				
	materials including and not limited to prefabricated solid				
	saligna timber panels as cladding, including structural steel				
	substrate, etc all in of architects approval and all in				
	accordance with architects drawings referred to in bill items				
	below				
18	Theatre timber balustrade with structural steel substrate	m	30		
	Core 30				
19	Theatre timber balustrade with structural steel substrate				
	circular on plan	m	76		
. [Core 76				
20	Ditto for right angle corner intersection	m	8		
İ	Core 8				
	GLAZED ALUMINIUM WINDOWS				
	Natural anodised extruded aluminium system to DOORS to				
	comply with code EN 755:2008, alloy 6063 T5 (sizes as set				
	out below) extruded aluminium shopfront doors comprising				
	CL051-R9 WP 90mm hinged stiles; CL051-R9 WP 90mm lock stiles; CL077-R9 SP 90mm meeting stiles; CL017-R4 85mm				
	head rail; CL 021-R6, 125mm cill rail and CL018-R4 SP 85mm				
	mid-rail; CL100 and CL101-Dlb drainage threshold cill &				
	adaptor; all in accordance with SABS standards and P.W.				
	codes of practice as per document OW371 and glazed with				
	6.38mm 17,5kg/m2 clear <u>laminated safety glass</u> as per SANS 10160/10; 10137/02; 10400/10 (part N of sec 3); 1263-1/06				
	and plugged to brickwork or concrete:				
34	Window with two panes, size overall 900 x 900mm high in				
21	two panels with top hung opening out panel and fixed				
	bottom panel with aluminium frame Catalogue No NPP1215				
	as per Window Schedule W02	No	10		
	Core 10				
	and the second s				
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	atturgette kilosoft i state og ett state og ett state og ett state og ett state og ett state og ett state og e	Unit	Quantity	Rate	Amount _I	
	W4200 2400					
22	Window in single fixed panel, size overall 1200 x 2100mm					
	high in frame Catalogue No NPP1215 as per Window Schedule W03					
	Schedule Wos	No	1			
	Core 1					
23	Fixed pane sliding window with two panes, size overall 1800 x	-				
	1500mm high with aluminium frame Catalogue No NPP1215					
1	as per Window Schedule W01	No	8			
1	Corp. 9					
24	Core 8 Window with four fixed panels, size overall 2800 x 3000mm					
24	high in frame Catalogue No NPP1215 as per Window					
	Schedule W50	No	50			
	Software 1700	. 140	50			
	Core 50					
	GLAZED ALUMINIUM DOORS					
	Note: Aluminium fabricator to ensure upright sections used					
	are a minimum of 90mm wide to allow for fixing of					
	ironmongery – Type R4 recommended.					
	Natural anodised extruded aluminium system to DOORS to					
	comply with code EN 755:2008, alloy 6063 T5 (sizes as set					
	out below) extruded aluminium shopfront doors comprising	10 to 10				
	CL051-R9 WP 90mm hinged stiles; CL051-R9 WP 90mm lock					
	stiles; CL077-R9 SP 90mm meeting stiles; CL017-R4 85mm					
	head rail; CL 021-R6, 125mm cill rail and CL018-R4 SP 85mm	ļ			ļ	
	mid-rail; CL100 and CL101-Dlb drainage threshold cill &					
	adaptor; all in accordance with SABS standards and P.W.					
ļ	codes of practice as per document OW371 and glazed with					
•	6.38mm 17,5kg/m2 clear <u>laminated safety glass</u> as per SANS					
	10160/10; 10137/02; 10400/10 (part N of sec 3); 1263-1/06					
	and plugged to brickwork or concrete:					
25	Four panel sliding door, size overall 3600 x 2100mm high with					
	two sliding panels and two fixed side lights, equipped with					
	electric automatic sliding door opener mechanism activated					
	by radar units mounted on both sides of the frame all as per					
	Door Schedule D05	No	2			
	Core 2					
26						
	fixed aluminium framed 6.32mm thick laminated safety glass					
	panels and four opening out top hung top panels, as per Door					
	Schedule D08	No	39	İ		
	Core 39					
						—
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1		Unit	Quantity 1	Rate	Amount	
27	Four panel folding door, size 3600 x 3000mm high with two swing panels opening out compromising aluminium framed 6.32mm thick laminated safety glass panels and two fixed side panels including four fixed top panels, as per Door	3				
	Schedule D09	No	1			
28	Four panel folding door, size 5500 x 4000mm high with four 6.32mm thick laminated safety glass top hung structural glass panels opening outwards, with aluminium door frame Catalogue No NPP1215 as per Door Schedule D04	No	6			
	Core 6 Fine gauze screens fitted to aluminium window frames:	l				
29	Screen for window with two panes, size overall 900 x 900mm high in two panels	No	10			
30	Core 10 Screen for window in single fixed panel, size overall 1200 x	N	1			
	2100mm high Core 1	No	1			
	Core 1 BURGLAR BARS					
	Mild steel burglar bars formed from 10mm diameter galvanised round bar mild steel in B2 pattern:					
31	Window, size overall 900 x 900mm high as per Window Schedule W02	No	10			
32	Core 10 Window, size overall 1200 x 2100mm high as per Window Schedule W03	No	1,			
	Core 1	٠				
33	Window, size 1800 x 1500mm high as per Window Schedule W01	No	8			
34	Core 8 Window, size overall 2800 x 3000mm high as per Window Schedule W11	No	50			
:	Core 50					:
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1		Unit	Quantity	Rate	Amount
	GALVANISED STEEL GATES, SCREENS, ETC				
	Welded screens and gates to brick walls:				
35	Purpose made single gate 1076 x 3038mm high of 50 x 6mm flat section outer frame and 25 x 25 x 3mm angle section inner frame welded to outer frame, filled in with "Mentis Flatex" type 352 expanded metal panel fixed all round to inner frame with 20 x 20 x 3mm angle section fixing beads bolted on with and including 6mm diameter bolts at 500mm centres and fitted with a pair of suitable hinges welded to post and lockable sliding bolt with keep in gate post finished with 1 coat zinc chromate and 2 coats of exterior enamel semi–gloss paint	No	14		
36	Purpose made double gate 2104 x 3038mm high, each leaf of 50 x 50 x 2mm hollow section frame and 75 x 25 x 2mm hollow section horizontal middle rail, filled in with 25 x 25 x 2mm hollow section vertical stiles at 150mm centres, each leaf fitted with a pair of suitable hinges bolted to wall with and including two 16mm expansion bolts, and the gate with hasp and staple and 12mm drop bolt welded on finished with 1 coat zinc chromate and 2 coats of exterior enamel semigloss paint	No	7		
	Core 7				
	PRESSED STEEL DOOR FRAMES				
	1,2mm Mild steel double rebated pressed metal frames with galvanised finish and 2 brass butt hinges per door leaf:				
37	Frame for door, size 813 x 2210mm high in one brick wall	No	37		
38	Core 37 Frame for door, size 915 x 2032mm high in one brick wall	No	12		
39	Core 12 Frame for two way swing door, size 1200 x 2100mm high for one brick wall	No	2		
40	Core 2 Frame for door, size 1930 x 3048mm high in 320mm thick wall	No	7		
	Core 7 1,6mm Zintec steel single metal frame with 12 adjusters and hex tool for tightening suitable for one brick walls				
41	Frame for door 760 x 2530mm high	No	6		
	Core 6				
	Carried to Collection			R	
	Section No. 2				
	Bill No. 12				
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		Unit	Quantity	Rate	Amount
	GALVANISED PRESSED STEEL COMBINATION DOORS AND FRAMES				
	1.2mm Flush both sides doors:				
42	Door, size 900 x 1200mm high with rebated frame suitable for 320mm thick wall and with chromium plated mortice lock	No	3		
43	Core 3 Double door, size 1600 x 1200mm high with rebated frame suitable for 320mm thick wall and with chromium plated mortice lock, barrel bolt and two cabin hooks with eyes fixed to 100 x 150 x 19mm thick varnished hardwood block plugged to walls	No	2		
	Core 2				
	1.2mm Thick Zintec steel doors:				
44	1.2mm Thick Zintec steel service duct door, size 760 x 2530mm of 45mm thick with composite Dufaylite honeycomb core and integral anti-jimmy strip	No	6		
	GALVANISED PRESSED STEEL TRANSFORMER ROOM DOORS AND FRAMES				
	1.6mm thick Galvanised mild steel doors and frames:				
45	Door, size 1500 x 2100mm high with rebated frame suitable for one brick wall and with chromium plated barrel bolt and mortice lock	No	4		
	Core 4				
	STEEL ROLLER SHUTTERS ETC				
	Electrically operated roller shutter doors and frames:				
46	Galvanised mild steel heavy duty automated door with 75 x 1.2mm thick slatted curtain roller shutter for opening 2500 x 3500mm high with standard bottom rail with overhead box 457mm high, with 75mm wide guides, with extruded aluminium T-bar with rubber seal, including 4,5mm thick end plates, guide rails, etc., and with slide bolt, fixed to brick jambs and concrete lintel over	No	1		
	Core 1				
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	Section No. 2 Bill No. 12				
	Metalwork				
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		Unit _I	Quantity	Rate	Amount	
47	Galvanised mild steel heavy duty automated door with 75 x					
	1.2mm thick slatted curtain roller shutter for opening 3500 x 4500mm high with standard bottom rail with overhead box					
	457mm high, with 75mm wide guides, with extruded					
	aluminium T-bar with rubber seal, including 4,5mm thick end					
	plates, guide rails, etc., and with slide bolt, fixed to brick jambs and concrete lintel over	No	4	:		
	•	110				
	Core 4 Automated by radar sensing both sides, electrically					
ļ	operated roller shutter doors and frames:					
48	Electrically operated slatted roller shutter for 2500 x 3500mm					
	high opening, including electrical connection and					
	commissioning (electrical isolator elsewhere)	No	1			
	Core 1					
49	Electrically operated slatted roller shutter for 3500 x 4500mm high opening, including electrical connection and				,	
	commissioning (electrical isolator elsewhere)	No	4			
	Core 4					
	<u>CAT LADDERS</u>		2.1			
	Mild steel cat ladders with circular safety bars:					
50	Supply and install complete cat ladder at average lengths of					
İ	4000mm as per architects detail	No	8			
ŀ	Core 8					
	MATT SURROUND					
	Mat surround formed of 20 x 20 x 3mm angle section aluminium In:					
51	2000 x 900mm Mat surround laid in floor screed	No	4	•		
	Core 4					
	ALUMINIUM LOUVRE UNITS					
	3mm Thick fixed louvre units screwed into timber doors:					
52	Louvre unit with frame, size 600 x 300mm high	No	49		ļ	
	Core 49					
	SHELVING (PROVISIONAL)					
	Proprietary epoxy coated mild steel shelving units:		:			
53	Floor unit approximately 4339mm x 600mm x 775mm high (size to be confirmed on site), with 32mm formica post-					
	formed worktop counter top etc, all as per Architects Detail		<u>.</u>			
		No	1			
	Core 1					
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	Bill No. 12					
	Metalwork					
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		Unit _i	Quantity	Rate	Amount
54	L-shaped steel shelving unit approximately 3282mm x 450mm x 2560mm high and 3100mm x 450mm x 2560mm high (size to be confirmed on site), fixed to stainless steel shell brackets with selftapping screws etc, all as per Architects Detail				
		No	1		
55	Core 1 L-shaped steel shelving unit approximately 6465mm x 450mm x 4725mm high and 3100mm x 450mm x 2560mm high (size to be confirmed on site), fixed to stainless steel shell brackets with selftapping screws etc, all as per Architects Detail				
	with sentapping screws etc, an as per Architects betain	No	1		
	Core 1				
56	U-shaped steel shelving unit approximately 3985mm x 450mm x 2560mm high and 1380mm x 450mm x 2560mm high and 3000 x 450 x 2560mm high (size to be confirmed on site), fixed to stainless steel shell brackets with selftapping				
	screws etc, all as per Architects Detail	No	1		
57	Steel shelving unit approximately 1900mm x 450mm x 2560mm high (size to be confirmed on site), fixed to stainless steel shell brackets with selftapping screws etc, all as per	1			
	Architects Details	No	1		
58	Steel shelving unit approximately 2850mm x 450mm x 2560mm high (size to be confirmed on site), fixed to stainless steel shell brackets with selftapping screws etc, all as per Architects Detail	Ϊνο	1		
	Core 1	110	-		
59	Steel shelving unit approximately 3780mm x 450mm x 2560mm high (size to be confirmed on site), fixed to stainless steel shell brackets with selftapping screws etc, all as per				
	Architects betain	No	1		
60	Steel shelving unit approximately 3784mm x 450mm x 2560mm high (size to be confirmed on site), fixed to stainless steel shell brackets with selftapping screws etc, all as per				
	Architects Details	No	1		
61	Steel shelving unit approximately 3900mm x 450mm x 2560mm high (size to be confirmed on site), fixed to stainless steel shell brackets with selftapping screws etc, all as per Architects Details	No	1		
	Core 1	1, 1 **			
	Carried to Collection			R	
	Section No. 2				
	Bill No. 12 Metalwork				
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62	Steel shelving unit approximately 4100mm x 450mm x 2560mm high (size to be confirmed on site), fixed to stainless steel shell brackets with selftapping screws etc; all as per				
	Architects Details	No	1		
	Core 1				
63	Steel shelving unit approximately 4600mm x 450mm x				
i	2560mm high (size to be confirmed on site), fixed to stainless				
	steel shell brackets with selftapping screws etc, all as per Architects Details	No	1	• •	
	Core 1		_		
64	Steel shelving unit approximately 5100mm x 450mm x				
	2560mm high (size to be confirmed on site), fixed to stainless				
	steel shell brackets with selftapping screws etc, all as per Architects Details	No	1		
		NO	1		
e E	Core 1 Steel shelving unit approximately 6341mm x 450mm x				
65	2560mm high (size to be confirmed on site), fixed to stainless				
	steel shell brackets with selftapping screws etc, all as per				
	Architects Detail	No	1	·	
	Core 1				
66	Steel shelving unit approximately 6620mm x 450mm x 2560mm high (size to be confirmed on site), fixed to stainless			i	
	steel shell brackets with selftapping screws etc, all as per				
	Architects Details	No	1		
	Core 1				
	Aluminium shelving:				
67	Aluminium anodised decorative aluminium perforated panel approximately 3300 x 600mm high fixed to cladding with				
	6.5mm mirror screw type with dome etc, all as per Architects				
	Detail	No	1		
	Core 1	!			
	LOCKERS				
68	Changeroom lockers approximately 2675mm x 450mm x				
	1880mm high (size to be confirmed on site), with 450 x 500 x			ļ	
	1800mm per locker unit with stainless steel fittings, stainless steel hinges and stainless steel padlock mechanism etc, all as				
	per Architects Detail	No	60		
	Core 60				
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	Bill No. 12				
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		and Arthur and Arthur	Unit _l	Quantity	Rate	Amount	
	<u>SUNDRIES</u>		."				
	Metalwork sundries:		•				
69	5 x 30mm Thick natural anodised alun	ninium weather bar	No	49			
	Core 49			40			
70	85 x 30mm Aluminium drip flashing		No	40			
	Core 40						
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<u>METALWORK</u>			
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	Unit	Quantity	Rate	Amount
SECTION NO. 2				
BUILDINGS		İ		
BILL NO. 13				
PLASTERING				ļ
(CPAP WORK GROUP NO. 142 UNLESS OTHERWISE	•			
STATED)				
Key: Location Description:				
Un/A Unallocated Core Core Bidg (Auto)				
Core Core Bldg (Auto) Nor North Block			Ш	
Sou South Block				
PREAMBLES				
The contractor is referred to the Model Preambles for Trades				
(2008 Edition) as issued by the Association of South African Quantity Surveyors before pricing this bill				
Preparation				
For granolithic applied monolithically, the concrete floor shall				
be swept clean after bleeding of the concrete has ceased and				
the slab has begun to stiffen; any remaining bleed water shall				
be removed and the granolithic applied immediately thereafter. For granolithic to be bonded to the floor slab after				
it has hardened, the slab surface shall be hacked (preferably				
by mechanical means) until all laitance, dirt, oil, etc is				
dislodged and swept clean of all loose matter. The slab shall then be wetted and kept damp for at least six hours before				
applying the granolithic			!	
Mix				
Granolithic shall attain a compressive strength of at least				
41MPa. The coarse aggregate shall comply with SANS 1083			:	
and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the				
size of the coarse aggregate shall be increased to the				
maximum size compatible with the thickness of the				
granolithic				
Panels 14- 14- 14- 14- 14- 14- 14- 14- 14- 14-				
Granolithic shall be laid in panels not exceeding 14m for monolithic finishes, not exceeding 9,5m for bonded finishes				
and not exceeding 6m for all external granolithic. Wherever				
possible, panels shall be square but at no time should the		!		
length of the panel exceed 1,5 times its width				
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Section No. 2				
Bill No. 13				
Plastering 120				
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		Unit i	Quantity	Rate	Amount
	Where possible joints between panels shall be positioned over joints in the floor slab and shall be at least 3mm wide through the full thickness of the finish, separated by strips of wood or fibreboard and finished with V–joints				
	Laying				
	Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels				
	Curing, seasoning and protection				
	Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying				
	<u>SCREEDS</u>				
	Screeds wood floated, on concrete:				
1	25mm Thick on floors and landings	m²	9 813		
2	Core 9813 75mm Average thick laid to falls and currents on slabs	m²	324		
Ì	Sou 324 GRANOLITHIC:				
	Granolithic steel floated, on concrete:		ļ		
	25mm Thick on floors and landings	m²	737		
3.	Core 737				
4	25mm Thick x 75mm high skirting	m	333		
	Core 333 INTERNAL PLASTER				
	Two coat cement plaster steel trowelled, on brickwork:				
5	On walls	m²	7 855		
6	Core 7855 On narrow widths	m²	453		
	Core 453 Two coat cement plaster steel trowelled, on brickwork circular on plan:				
7	On walls	m²	448		
	Core 448				
	Carried to Collection			R	
	Section No. 2				
	Bill No. 13				
	Plastering 121				

ł		Unit	Quantity	Rate	Amount
	INTERNAL PLASTER				
	Cement plaster steel trowelled, on brickwork:				
8	On walls	m²	15 776		
	Core 15776				
9	On narrow widths	m²	126		
	Core 126 EXTERNAL PLASTER				
	Cement plaster steel trowelled, on brickwork:				
10	On walls	m²	8 980		
	Core 8980			:	
11	On narrow widths	m²	101		
	Core 101				
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	Carried to Collection			R	
	Section No. 2				
	Bill No. 13				
	Plastering 122				
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BILL NO. 13			
PLASTERING			
COLLECTION		D N-	
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	Carried To Section Summary	R	
Section No. 2			
Bill No. 13 Plastering			
riastering	122		

1		Unit	Quantity	Rate	Amount	
SECTION NO	D. 2					
BUILDINGS	·					
BILL NO. 14						
TILING						
(CPAP WOR	K GROUP NO. 144 UNLESS OTHERWISE					
STATED)						
<u>Κeγ</u> : Un/A	<u>Location Description:</u> Unallocated					
Core	Core Bldg (Auto)					
Nor	North Block South Block					
Sou	SOUTH BIOCK			·		
PREAMBLES	<u>5</u>					
	or is referred to the Model Preambles for Trades					
	n) as issued by the Association of South African					
	veyors before pricing this bill					
	NTARY PREAMBLES					
Descriptions						
	bed as "fixed with adhesive to plaster (plaster descriptions of tiling on brick or concrete walls,					
	shall be deemed to include 1:4 cement plaster			,		
	descriptions of tiling on concrete floors etc shall					
	o include 1:3 plaster bedding. Tiling described as dhesive on power floated concrete" shall be					
deemed to in	iclude for approved tiling key–coat. Ceramic,					
	arble and granite tiles are to be fixed and					
	suitable adhesives and grouts from the range of ecommended by the manufacturer of the tiles					
Fixing:	,					
	ed as 'fixed with adhesive on power floated					
concrete' sha	all be deemed to include for approved tiling key-					
coat						
WALL TILIN						
600 x 300mn	n Duratile full bodied polished porcelain wall stally laid and staggered full tiles fixed with Ezee					
	or similar approved adhesive (elsewhere) with					
straight joint	ts in both directions jointed and flush pointed				1	
white grey ti	le grout:	2	2774			
1 On walls		m²	3 774			
Core 1128	Nor 1794 Sou 852					
						<u> </u>
	Carried to Collection			R		
Section No. 3	2					
Bill No. 14						
Tiling						
	124				-	

1		Unit	Quantity	Rate	Amount
2	On narrow widths	m²	3		
	Core 3				
	FLOOR TILING			:	
	600 x 300mm Duratile full bodied polished porcelain wall tiles, horizontally laid and staggered full tiles fixed with Ezee Tile Premium or similar approved adhesive (elsewhere) with straight joints in both directions jointed and flush pointed white grey tile grout:				
3	On floors and landings	m²	3 363		
	Core 1662 Nor 813 Sou 888				
4	On stair treads and risers	m²	300		
	Core 222 Nor 78 Porcelain floor tile skirting 100mm high fixed with adhesive on power floated concrete floor and flush pointed with tinted waterproof jointing compound (PC amount R400.00/m2 nett)				
5	On floors and landings	m	200		
	Core 200 Glass Mosaic tiles fixed with an approved tile adhesive and pointing with tinted colour grout (PC amount R2000.00/m2 nett)				
6	On columns (Provisional)	m²	44		
	Core 44 12mm Thick Dekton wall cladding on columns fixed in accordance to manufacturers instruction (PC amount R7500.00/m2 nett)				
7	On columns (Provisional)	m²	40		
	NOSING, JOINT COVERS, PROTECTORS, ETC. (PROVISIONAL)				
	Aluminium straight edge trim in matt silver suitable for selected glazed tile thickness at corners, changes in wall finish and mirror surrounds with strip to be securely bedded in cement-based adhesive:				
8	6mm Natural anodised aluminium tiling edge trim	m	360		
9	Core 360 9mm Natural anodised aluminium movement joint edge trim	m	150		
	Core 150				
	Carried to Collection			R	
	Section No. 2				
	Bill No. 14				
	Tiling 125				!
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				LIMI	POPO PROVINCIAL THE	ATRE
		Unit	Quantity	Rate	Amount	
10	48mm M-Trim Code ASCW480 aluminium structural wall joint cover	m	100			
11	Core 100 76mm M–Trim Code ASCF760 aluminium structural floor joint cover	m	100			
	Core 100	m	100			
12	Kirk M-Trim Ref SSE 120 grade 316 stainless steel edge trim	m	200			
13	Core 200 Kirk M-Trim Ref. SQE 120 grade 316 Stainless steel square edge stair nosing, plugged and counter sunk screwed into cement screed with stainless steel screws	m	300			
	Core 300					
14	15 x 15mm anodised aluminium gamma wall reveal fixed to walls	m	50			
15	Core 50 Stainless steel crash bump rail	m	30			
	Core 30	İ				
16	Straight edge trim "ASE120"	m	60			
	Core 60					
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	Camidad A. Callandan			n		
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	Bill No. 14					
	Tiling					
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		LIMP	OPO PROVINCIAL THE	ATRE
			Amount	
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BILL NO. 14				
<u>TILING</u>				
COLLECTION				
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Section No. 2				
Bill No. 14				
Tiling				
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	Unit	Quantity	Rate	Amount
SECTION NO. 2				
BUILDINGS				
BILL NO. 15			•	
PLUMBING AND DRAINAGE				
(CPAP WORK GROUP NO. 148 UNLESS OTHERWISE				
STATED) Key: Location Description:				
<u>Key:</u> <u>Location Description:</u> Un/A Unallocated		,		
Core Core Bldg (Auto)				
Nor North Block Sou South Block			:	
PREAMBLES				
The contractor is referred to the Model Preambles for Trades (2008 Edition) as issued by the Association of South African Quantity Surveyors before pricing this bill				
SUPPLEMENTARY PREAMBLES				
Note: Supplementary Preambles applicable to trades in the Building section will apply equally to all buildings under construction on this project.				
General		ŧ		
Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc and to steel pipes (adaptors for connections to copper pipes, etc are given separately)				
Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured)				
As-built drawings				
Where required, the contractor shall prepare an updated set of as-built drawings. At completion of the contract the contractor shall hand these drawings to the principal agent for reproducing onto the originals for handing over to the employer (provision for allowance of as-built drawings elsewhere)				
PVC-U pipes and fittings				
Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings				
Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings				
Carried to Collection			R	
Section No. 2				
Section No. 2 Bill No. 15				
Plumbing And Drainage				
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ì	the state of the s	Jnit	Quantity	Rate	Amount	
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	Copper pipes					
	Pipes shall be hard drawn and half-hard pipes of the class described. 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				·	
	Class 2 type. Capillary solder fittings shall comply with ISO 2016					
	Reducing fittings					
	Where fittings have reducing ends or branches they are described as reducing and only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained					
	Fixing of pipes					
	Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc, casting in, building in or suspending not exceeding 1m below suspension level					
	Paper wrapping to pipes					
	Pipes chased into brickwork must be wrapped with two layers of stout brown paper tied with wire. Rates are to include for wrapping around joints and fittings					
	Sealing of edges					
	Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone					
	RAINWATER DISPOSAL					
	Note:					
	For galvanised structural steel gutters and fittings see the Structural Steelwork bills in the Buildings section.					
	For plumbing of water supply internally and externally see civil works in the External Works section		=			
	0.6mm Stainless steel gutters and rainwater pipes:					
1	250 x 340 x 250mm VHV roof gutters	m	16			
	Un/A 16	NI-	2			
2	Extra over gutter for stopped end	No	2			
	Un/A 2					
						+
	Carried to Collection			R		ļ
	Section No. 2					
	Bill No. 15					
	Plumbing And Drainage 129					
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1		Unit	Quantity	Rate	Amount
3	Extra over gutter for outlet for 200mm diameter pipe	No	1		
4	Un/A 1 200mm Diameter rainwater pipes	m	6		
5	Un/A 6 Extra over rainwater pipe for bend	No	2		
6	Un/A 2 Extra over rainwater pipe for connection to stormwater collection catchpit (elsewhere measured)	No	1		
	Un/A 1 "Safintra" Aluminium-zinc or equally approved				
7	400 x 280mm Deep gutters	m	350		
8	Core 350 150mm diameter downpipe	m	190		
9	Core 190 Extra for stopped end	No	90		
10	Core 90 Extra for shoe	No	90		
11	Core 90 Extra for bend	No	90		
	Core 90 Class 6 uPVC rainwater vertical downpipes cast and concealed in reinforced concrete columns from roof level down to stormwater drainage points on the various levels				
12	110mm Pipes	m	180	'	
13	Core 180 160mm Pipes	m	240		
14	Core 240 200mm Pipes	m	360		
17	Core 360 Extra over uPVC pipes for fittings				
15	110mm Bend	No	150		
16	Core 150 160mm Bend	No	190		
10	Core 190				
17	110mm Junction	No	150		
18	Core 150 110 x 160mm Eccentric Reducer	No	15		
	Core 15				
	Carried to Collection			R	
	Section No. 2				
	Bill No. 15				
ļ	Plumbing And Drainage				
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		Unit	Quantity	Rate	Amount	
19	160 x 200mm Eccentric Reducer	m	35	1		
	Core 35					
	Cast iron pipes with SSN couplings					
20	50mm Weep pipe 420mm long with splay-cut end, built					
	through brickwork	No	22			
	Core 22					
	Fullbore outlets embedded flush with surrounding concrete				ļ	
ļ	surface at the lowest point of falls and crossfalls	.	10			
21	110mm Diameter vertical outlets	No	10			
	Core 10	No	15			
22	160mm Diameter vertical outlets	NO				
	Core 15					
	SAMPLE ROOM					
	Sample room:					
23	Provide a sample room displaying all fittings for approval of the quality and standard of finishes to be achieved	عدا				
	the quality and standard of missies to be achieved	ltem				
	Core 1					i
	SANITARY FITTINGS				:	
	Geberit:				!	
24	Bambini floor standing WC comprising WC pan with double	N	1			
	flap white Duroplast seat	No	1			
	Core 1					
25	Smyle Square Code 500.685.01.1 white Duroplast antibacterial wall hung WC, size 352 x 450 x 330mm high,					
	shrouded, rimfree with double flap seat, sandwich shape and				i	
	with Sofi-closing mechanism and quick release hinges	No	32			
	Core 32					
26	Pearl Code 7300SC paraplegic semi–close coupled with 90degree outlet open rim washdown pan and matching 9					İ
	litre cistern complete with lid, fitments and purpose made					
	chromium plated side-flush lever and Thermoset seat and					
	cover plate	No	5			
١	Core 5		•			
27	Icon double fine fireclay washbasin, size 1200 x 485mm fixed	NI -	10			
	with and including wall brackets	No	18			
	Core 18					
						
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	Section No. 2					
	Bill No. 15					
	Plumbing And Drainage					
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1		Unit	Quantity	Rate	Amount	
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28	550 x 450mm Variform rectangular countertop washhand basin with singe tap hole mounted in vanity slab or cupboard top (vanity slab or cupboard elsewhere)	No	8			
29	Core 8 Hibiscus paraplegic Code 702303 wash hand basin, size 540 x 405mm with centre semi-punched taphole, integrated overflow and chainstay hole and with pedestal	No	5			
30	Core 5 Selnova urinal with rear outlet including concealed urinal control, size 360 x 610 x 370mm deep	No	12			
31	Core 12 Setaplano Varicor shower surface, size 900 x 900mm with Setaplano installation frame of powder coated steel and with Installation set including shower drain	No	10			·
	Core 10 Accessories:					
32	300mm Matt chromium plated connection set for wall–hung WC	No	32			
33	Core 32 White wall hung urinal division screen, size 400 x 700mm high	No	9			
34	Core 9 Sigma20 actuator plate for dual flush of brushed or polished stainless steel	No	32			
35	Core 32 Actuator plate Type Sigma01 for dual flush with white, yellow and green decals	No	1.			
36	Core 1 Sigma concealed cistern 12cm with Kombiflex element for wall-hung WC 108cm	No	32			
37	Core 32 Sigma concealed cistern 12cm, 6/3 litre flushes	No	1			
	Core 1 Franke stainless steel:					
38		No	1			
	Core 1					
	Carried to Collection			R		
	Section No. 2 Bill No. 15					
	Plumbing And Drainage 132					

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1	·	Unit	Quantity	Rate	Amount
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	WASTE UNIONS ETC			•	
l	Geberit:				
39	32mm Pop-up chromium plated brass basin waste union	No	8		
	Core 8				
	TRAPS ETC				
	Geberit:	No	10		
40	50mm Black P-trap with vertical inlet and horizontal outlet	140			
41	Core · 10 50mm White Alpine plastic urinal trap with horizontal outlet	No	12		
40	Core 12				
42	32mm Chromium plated plastic bottle trap with dip tube with D32mm G1 1/4 horizontal outlet	No	8		
	Core 8	NI.	12		
43	Urinal universal flush control set with flush pipe	No	12		
44	Core 12 Urinal flush control set with pneumatic flush actuation, matt				
***	chromium plated actuator plate Type 01 and with flush pipe	No	12		
	Core 12				
	TAPS, VALVES, ETC				
	Hansgrohe:				
45	Hansgrohe Vernis shape showerpipe, size 1124 x 512mm high 230 1jet Ecosmart including tap, pipe, shower rose and hand				
	held shower head with pipe and including thermostat	No	10		
	Core 10				
46	Hansgrohe Vernis single lever shower mixer for concealed fix	No	10		
	Core 10	No	34		
47	Metris 110 single lever washbasin mixer	NO			
48	Core 34 Metropol; 110 Chromium plated washhand basin mixer	No	10		
	Core 10				
49	15mm Highrise Swivel sink mixer of solid DZR brass				
	construction with ceramic disk cartridge and smart line cleaning aerator	No	1		
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!	Core 1				
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	Section No. 2 Bill No. 15				
	Plumbing And Drainage				
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1		Unit	Quantity	Rate	Amount	1
50	Cobra Medical mixer Code 515/055-21 CPA elbow action chromium plated wall type with bent connections at 178mm fixed centre and curved swan neck swivel outlets and 1/4 turn ceramic disc	No	5			
	Core 5 Other:		_			
51	15mm Benisker chromium plated angle regulating valve	No	44		·	
52	Core 44 20mm Brass hose bib-tap	No	6			
53	Core 6 28mm Brass fullway gate valve	No	6			
54	Core 6 35mm Brass stopcock	No	8			
	Core 8 BATHROOM SUNDRIES					
	Bathroom fittings:					
55	Code STRX618 soap dispenser surface mounted with InoxPlus treatment including cylinder lkock and mounting kit	No	24			
56	Core 24 Code RODX672E double toilet roll holder with spindle system for recessed mounting made from .8mm thick stainless steel with folded front cover and cylinder lock including stainless					
	steel screws and dowels	No	39			
57	Core 39 Code RODX605E recessed waste bin of 23 capacity manufactured from 0.8mm stainless steel, finished with					
	rounded edges including cylinder lock, mounted with wall frame including stainless steel screws and dowels	No	16			
	Core 16	1.2	-			
58	Hand dryer Code HF2400HD, wall mounted with automatic cut-off and vandal resistant lock, screws and key wrench	No	14			
	Core 14 Grab rails:	.N.J.	:			
59	Chairman Industries 32mm Code DL3 stainless steel dog- legged side grab rail, 990mm girth, plugged to wall with					
	stainless steel screws	No	5			
	Core 5					
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	Bill No. 15 Plumbing And Drainage					
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		Unit [Quantity	Rate	Amount	
Chairman Industries 32mm legged rear grab rail, plugg screws	Code SR2 stainless steel dog- ed to wall with stainless steel	 No	5			
Core 5						
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	Section No. 2			
	Bill No. 15			
	Plumbing And Drainage 136			

1		Unit	Quantity	Rate	Amount	
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	SECTION NO. 2					
	SECTION NO. 2 BUILDINGS					
	BILL NO. 16					
	GLAZING					
	(CPAP WORK GROUP NO. 150 UNLESS OTHERWISE					
	STATED)					
	Key: Location Description:					
	Un/A Unallocated Core Core Bldg (Auto)					
	Nor North Block					
	Sou South Block					
	PREAMBLES					
	The contractor is referred to the Model Preambles for Trades (2008 Edition) as issued by the Association of South African Quantity Surveyors before pricing this bill					
	SUPPLEMENTARY PREAMBLES					
	Note: Supplementary Preambles applicable to trades in the Building section will apply equally to all buildings under construction on this project.					
	Float glass:					
	The term 'float glass' is used for monolithic annealed glass.					
	Laminated glass:					
	Laminated glass to have polyvinyl butyral (PVB) interlayer(s).				. !	
	SHOWER DOORS					
	Shower doors:					
1	Geberit walk-in shower panel, size 990 x 2000mm high of 8mm thick reflective fume' glass with premounted sealing profile under shower partition wall for mounting on shower trays	No	10			
	Core 10 MIRRORS					
	Geberit:					
2	Option Basic illuminated mirror, size $1000 \times 600 \times 42 \text{mm}$ thick with lighting strips on both sides	No	8			
	Core 8					
	Carried to Collection		•	R		_
	Section No. 2					
	Bijl No. 16					
	Glazing 137					

1	Unit	Quantity	Rate	Amount	
3	Option Basic illuminated mirror, size 1200 x 600 x 42mm thick	ļ			
	with lighting strip on top No	20			
]	Core 20				
	0.8mm Pilkington or similar approved shatter-resistance mirrors				
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	Glazing				
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	BILL NO. 16			
	<u>GLAZING</u>			
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	Bill No. 16 Glazing			!
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m²	294			
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	ON EXTERNAL FLOATED PLASTERED SURFACES		. :			
	One coat alkali resistant plaster primer and two coats modified acrylic fine textured emulsion paint:					
5	On walls	m²	8 980			
	Core 8980 ON NEW SMOOTH CONCRETE SURFACES					
	One coat "Dulux" trade alkali resistant plaster primer (full coat), and two coats "Dulux" trade 100 lowsheen or similar approved paint:					
6	On granolithic screeds	m²	190			
7	Nor 190 On concrete soffits	m²	275			
	Core 95 Nor 67 Sou 113 ON PLASTERBOARD SURFACES					
	One coat 'Plascon Professional' gypsum and plaster primer (PP700) and two finishing coats 'Plascon Professional Super Matt' (PEM 900/TSA) acrylic emulsion paint					
8	On ceilings and cornices, including priming metal nailheads	m²	1 599			
	Core 1599 ON METAL SURFACES					
	One coat acrylic emulsion metal primer, one coat universal undercoat and two coats super universal enamel paint on galvanised steel:					:
9	On doors and frames	m²	309			
10	Core 309 On steel gates	m²	204			
	Core 204 Prepare by cleaning for corrosion protection to SABS 1200HC - 1988 Sub clause 5.4.3.2 including thorough					
	scrapping and wire brushing and grinding to Grade 5.3 of Swedish SIS 05590000 - 1967 with treatment removing loose		•			
	mill scale rust and foreign matter and finally cleaned with a vacuum cleaner, clean, dry compressed air or clean brush leaving the surface with a pronounced metallic appearance, painted with approved rust corrosion protection, one universal undercoat and two coats of Plascon Velvaglo high gloss paint on:		·			
11	Structural steelwork	m²	10 595			
	Core 10595					
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	Section No. 2 Bill No. 17					
	Paintwork					
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			Unit.	Quantity ,	Rate	Amount	1
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	ON WOOD SURFACES						
	One coat 'Plascon Professional' wood princoat universal undercoat and two finishin Velveglo (VLW/TVW)' gloss enamel paint:	ig coats 'Plascon					
12	On doors		m²	123			
	Core 123		- 1				
13	On door frames etc.		m²	11			
	Core 11	sto Suedo Matt					
	Prepare, stop and apply one coat Woodco varnish diluted 20% with mineral turpent undiluted Woodcote Suede Matt varnish, wiped down between coats with all tops a doors varnished:	ine and two coats lightly sanded and					
14	On floors		m² l	1 290			
15	Core 1290 On skirtings not exceeding 300mm wide		m	647			
	Core 647						
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		Carried to Collection			R		+-
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	Bill No. 17 Paintwork						
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	BUILDINGS			
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2	EARTHWORKS	40		
3	CONCRETE, FORMWORK & REINFORCEMENT	47		
4	MASONRY	53		
5	WATERPROOFING	58		
6	ROOF COVERINGS	61		
7	CARPENTRY AND JOINERY	71 '		
8	CEILINGS, PARTITIONS & ACCESS FLOORING	83		
9	FLOOR COVERINGS	87		
10	IRONMONGERY	88		
11	STRUCTURAL STEELWORK (PROVISIONAL)	98	i	
12	METALWORK	116		
13	PLASTERING	120		
14	TILING	1 24		
15	PLUMBING AND DRAINAGE	133		
16	GLAZING	136		
17	PAINTWORK	140		
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SECTION NO. 3 EXTERNAL WORKS

	Unit	Quantity	Rate	Amount
SECTION NO. 3				
EXTERNAL WORKS				
BILL NO. 1	-			
EARTHWORKS, ROADS, STORMWATER				
PREAMBLES	,			
The contractor is referred to the Model Preambles for Trades (2008 Edition) as issued by the Association of South African Quantity Surveyors before pricing this bill				
SUPPLEMENTARY PREAMBLES				
COTO Standard Specifications:				
The Coto Standard Specifications for Road and Bridge Work of South Africa will apply to external work on this project				
Clashes in specifications encountered between differing documents referred to are to be immediately reported to the Principal Agent and Civil Engineer in writing. Instructions will be given re resolve the issues timeously				
Clauses to apply equally:	, t * *	· · · · · · · · · · · · · · · · · · ·		
All preambles and supplementary preambles for building work listed in the trades in the bills in the other sections of these bills of quantities will apply equally to all bills in the External Works section				
Municipal services:				
The contractor shall be responsible to communicate and liaise with the responsible municipal service managers with respect to services affected by work on this site and adjacent sites and the proper method of protection of these services				
All excavations are to be effectively barricaded with all applicable signage and warning lights				
Defects Liability period:				
The defect liability period on building and electrical work is three (3) months from the date of Works Completion. The defect liability period on mechanical plant and electrical equipment is twelve (12) months from the date of Works Completion. The defect liability period on civil works and external works is twelve (12) months from the date of Works Completion				
Access:				
Vehicle and pedestrian access to all occupied buildings on the site shall be maintained at all times				
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The state of the s	Unit	Quantity	Rate	Amount	I
Existing services:					
The contractor shall carefully identify and expose all existing services by hand prior to the commencement of the works					
Lateral support:					
All necessary precautions are to be taken with lateral support where excavations reduce the ground level on site to a lower level than adjacent sites. Precautions are also to be taken when excavating near existing structures. Strict protection of workmen at work in areas requiring lateral support is to be taken at all times					
Work to municipal roads:					
Management of traffic on and adjacent to the site affected by the works shall be in accordance with the requirements of the local traffic authority and must be timeously coordinated by the contractor with all parties.					
The consulting engineer shall be advised in writing by the contractor two days prior to commencement of any work on or near an existing public road.					
The contractor shall liaise with the roads and stormwater control divisions of the local municipality with respect to the reinstatement of roads and sidewalks. Any clash between drawings or information issued by the consulting engineers and the municipality shall be immediately communicated to the consulting engineers who shall direct the course to be followed. Instructions on this site shall only be taken from the consulting team employed as agents of the client					
Testing: The following tests will be required by the					
consulting engineers:					ı
Canavata Tacting					
Concrete Testing: At least one set of cubes per day of casting (i.e. 150 x 150 x					
150mm).					
Crushing tests:					
Foundations-50 m3-12 cubes.			·		
Floor slabs-50 m3-12 cubes.					
Columns and beams – 6 m3 – 6 test cubes.					
Slump tests:					
1 per 6 m3.					
Structural Steel:					
X-ray testing for welded connections.					
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J		Unit	Quantity	Rate	Amount
	Bulk Earthworks compaction tests:				
	1 x test per 1500 m2 – OMC, Indicator, CBR.				
	1 x test per 1500 m2 – G7 per 300 mm layer.	·			i
	Road works compaction tests				
	1 x test per 1500 m2 – G7 per 200 mm layer.				
	1 x test per 1500 m2 – G5 per 150 mm layer.				
	1 x test per 1500 m2 – G2 per 100 mm layer.				
	Restricted backfill compaction tests				
	1 x test per 5 m2 – selected backfill per 300 mm layer.				
	Under floors compaction tests				
	1 x test per 1500 m2 – G5 per 150 mm layer.			į	
	Trenches (building services) compaction tests:				
	1 x density test per 30 m of trench length per 150 mm insitu layer compacted (OMC).				
	1 x density test per 30 m of trench length per 300 mm layer (granular backfill) compacted (OMC).				
	1 x density test per 30 m of trench length per 300 mm layer (selected backfill) compacted (OMC).				
ŀ	Pipework-water/fire:				
	Pressure test- 1 per ring main.				
	Pipework Sewer:				
1	Air test -per section between manholes.				
	Mirror test– per section between manholes.				
	Manholes:				
	Water tightness test-1 per 2 manholes.				
	Asphalt:				
	1 x test per 300 m2.				
	·				
	The following standards and specifications shall apply to all work to be executed in external areas:				
	SPECIFICATIONS, DESIGN CODES AND CODES OF PRACTICE				
- 1	The following specifications and codes will apply on this project:				
	SANS 1200A GENERAL				
	SANS 1200C SITE CLEARANCE				
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	Unit	, Quantity ,	Rate	Amount
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SANS 1200D EARTHWORKS				
SANS 1200DB EARTHWORKS (PIPE TRENCHES)				
SANS 1200DK GABIONS AND PITCHING				
SANS 1200DM EARTHWORKS (ROADS, SUBGRADE)				
SANS 1200G CONCRETE (STRUCTURAL)				
SANS 1200GE PRE-CAST CONCRETE			:	
SANS 1200L MEDIUM PRESSURE PIPELINES				İ
SANS 1200LB BEDDING (PIPES)				
SANS 1200LC CABLE DUCTS				
SANS 1200LD SEWERS				
SANS 1200LE STORMWATER DRAINAGE				
SANS 1200LF ERF CONNECTIONS (WATER)				
SANS 1200M ROADS (GENERAL)				
SANS 1200ME SUBBASE				
SANS 1200MF BASE				
SANS 1200MJ SEGMENTED PAVING				
SANS 1200MK KERBING AND CHANNELLING				
SANS 1200MM ANCILLARY ROADWORKS				
Further applicable codes and standards:				
SANS 1182 Light gauge welded steel pipes				
SANS 62–1 Steel pipes Part 1: Pipes suitable for threading and of nominal size not exceeding 150 mm				
SANS 62–2 Steel pipes Part 2: Screwed pieces and pipe fittings of nominal size not exceeding 150 mm				
SANS 1123 Pipe flanges				
SANS 564 Rubber insertion sheeting				
SANS 664 Cast iron gate valves for waterworks				
SANS 966 – 1 Components of pressure pipe systems Part 1: Unplasticized poly (vinyl) chloride (PVC–U) pressure pipe systems				
SANS 1128 Fire fighting equipment Part 1: Components of underground and above ground hydrant systems				
SANS 1128 Fire fighting equipment Part 2: Hose couplings, connectors and branch pipe and nozzle connections				
SANS 1601 Structured wall pipes and fittings of uPVC for buried drainage and sewerage systems	,			
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	Unit	Quantity	Rate	Amount
SANS 791 Unplasticized polyvinyl chloride (uPVC) sewer and drain pipes and fittings				
SANS ISO 4427: PE100 PN12.5: HDPE Pipes				
SANS 10100 – The Structural Use of Concrete.				
SANS 10155 – Accuracy in Buildings				<u> </u>
SANS 10164 – The Structural Use of Masonry.				
SANS 10163 – The Structural Use of Timber.				
SANS 10162 – The Structural Use of Steel.				
SANS 10160 – The general procedures and loadings to be adopted in the design of buildings.				
SANS 1200 – Standard Specification for Civil Engineering Construction.				
SANS 10400 – The Application of the National Building Regulations.				
Road design:				
Roads pavements will be designed in accordance with UTG 3:		į		
Structural Design of Urban Roads, 1993, published by the Committee of Urban Transport Authorities;	·			
Geometric Design: Draft UTG 7 of 1989;				
The South African National Roads Agency Limited,				
"Drainage Manual–5th edition", Pretoria, 2006 CSIR (2005),				
"Red Book - Human Settlement Planning and Design",				
CSIR Building and Construction Technology Structural Design of Segmental Block Pavements for Southern Africa, UTG2;				
Structural Design of Road Pavements,				
TRH4 Cementitious Stabilizers in Road Construction, TRH13.				
Approved dumping site:				
The dumping or disposal sites located by the contractor for use under this contract are to be approved by the Civil Engineer and may not be utilised until written approval is provided				7.
PRICING				
Earthworks and Services as Civil Eng:				
Earthworks	Item			
Roads, Paved Surfaces And Landscaping:	ltem			
Carried to Collection			R	
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		Unit	Quantity	Rate	Amount
3	Stormwater Drainage:	ltem		į	
	CLEARING AND GRUBBING				
	Clearing:				
4	Clearing with machines and some hand labour where	-			
	necessary.	Hect	4.50		
5	Clearing for new fence lines (over a width of 2,0 m)	km	2		
6	Clearing for service trenches (over the agreed width required)	m²	80		
	Grubbing:				
7	Grubbing with machines and some hand labour where				
·	necessary	Hect	5		
8	Grubbing by hand for new fence lines (over a width of 2,0 m)	km	2		
9	Grubbing by hand for service trenches (over the agreed width				
	required)	m²	80		
	Removal and grubbing of large trees and tree stumps:				
10	Girth equal to or exceeding 1,0 m up to and including 2,0 m	No	10		
11	Re-clearing of previously cleared areas	Hect	5		
	Conservation of topsoil:				
12	Stockpiling topsoil	m³ .	2 025		
13	Windrowing topsoil	m³	203		
	GENERAL REQUIREMENTS AND TRENCHING FOR	: .			
	<u>SERVICES</u>				
	Trench excavation (in soft material):				
	Trenches up to 1,0 m wide:				
14	Up to 1,0 m deep	m³	o		
	Extra over items C2.1.6, C2.1.8 and C2.1.16 for excavating in:				
15	Hard material irrespective of depth	m³	43		
	Trench excavation using labour enhanced construction	-			
	methods:				
	Trenches up to 1,0 m wide (in soft material):		400		
16	Up to 1,0 m deep	m³	100		
	Backfilling of trenches:				
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		Unit	Quantity	Rate	Amount	
	and the second of the second o					
	Backfill compacted to 93 % (100 % for sand) of MDD (areas subject to traffic loads) using material:		·			
17	From the excavated trench material	m³	86			
18	From other excavations on Site	m³	86			
19	From commercial sources (state material type)	m³	86			
	Removal and disposal of spoil material from trench excavations:		į			
20	To spoil sites or dumping areas provided by the Contractor	m³	129			
	Dealing with water during services work:					
21	Dealing with surface water	Sum	1			
22	Dealing with subsurface water	Sum	1	1		
	DRY SERVICES					
	Supply, lay and prove ducts:					
	Structured wall HDPE conduits, complying with SANS 61386-24: 2005, with smooth internal surface, with push-on couplings with rubber seals, and with pilot string:					
23	110 mm diameter (OD)	m	126	i		
24	160 mm diameter (OD)	m	63			
	Bedding for ducts compacted to 90 % of MDD (100 % for sand) using material:					
	From commercial sources:					
25	Non-cohesive material (state material type)	m³	71			
	Duct accessories (markers, marking, draw wires and end caps, etc.):					
	Duct markers (150x150x150mm class 25MPa/19mm concrete, engraved with service symbol and encasing the end of the draw wire)					
26	Draw wires	m	227			
27	End caps or plugs (HDPE)	No	63			
	Other accessories:					
28	1m long class 25MPa/19mm kerb with service symbol engraved into it (SANS 927 Figure 7 kerb shape)	No	63			
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		Unit	Quantity	Rate	Amount
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	<u>DRAINS</u>				
	Excavation for open drains:				
	Excavating all material situated within the following depth ranges below the surface level using conventional methods:				
29	0 m to 1,5 m	m³	2 047		
30	Extra over sub-item C3.1.1.1 for excavation in hard and boulder material irrespective of depth	m³	2 047		
31	Excavating soft material situated 0 m to 1,0 m below the surface level using labour enhanced construction methods	m³ į	4 777		
	Excavation, clearing and disposal of accumulated sediment in existing lined drains and drainage systems:				
	Using labour enhanced construction methods:				
32	Manholes and inlet and outlet structures	m³	50		
33	Culvert barrels	m³	36		İ
	Excavation and disposal of material for subsoil drainage systems:				
34	Excavating soft material situated within 0 m to 1,5 m below the surface level using labour enhanced construction methods	m³ .	77		
	Excavation and disposal of material for composite in-plane fin-drain type drainage systems using a trenching machine:				
35	Trench width of 750mm and depth of 2m	m	340		
	Impermeable backfilling to subsoil drainage systems:				:
36	G5 material obtained from commercial sources	m³	434		
	Construction of banks and dykes:				
37	Banks and dykes using labour enhanced construction				
	methods	m³	2 160		
İ	Natural permeable material in subsoil drainage systems (approved crushed stone):				
38	Crushed stone obtained from commercial sources (19mm single graded crushed stone)	m³	107		
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		Unit	Quantity	Rate	Amount	
	Pipes in subsoil drainage systems:					
39	Perforated HDPE geopipe complete with couplings (110mm diameter perforated)	m	854			
40	Geotextiles (indicate type, grade, etc.)	m² l	1 281			
	Composite drainage systems:					
41	Vertical subsoil strip drainage systems (2m wide findrain system complete with all vertical drainage materials and Including the geopipe)	m	340			
	Concrete outlet structures, manhole boxes, junction boxes and cleaning eyes for subsoil drainage systems:					
42	Connect to stormwater drainage structures	No	10			
43	Inspection boxes (specify each type and drawing reference)	No	10		,	
44	Junction boxes (specify each type and drawing reference)	No	10			
45	Cleaning eyes (specify each type and drawing reference)	No	20			
	Caps for subsoil drain pipes:			1		
46	PVC end plugs	No	50	:		
47	Test flushing of subsoil drain pipe systems	No	8			
	CULVERTS		į			
	Excavation for culvert structures:					
	Excavating in all material situated within the following depth ranges below the surface level:					
48	0 m to 1,5 m	m³	1 046			
49	Exceeding 1,5 m and up to 3,0 m	m³	215			
50	Exceeding 3,0 m and up to 4.5 m	m³	24			
51	Excavating soft material 0 m to 1,5 m below the surface level using labour enhanced construction methods, or instructed by hand under Clause A3.2.7.2d)	m³	468			
52	Extra over sub-item C3.2.1.1 for excavation in hard or boulder material, irrespective of depth	m³	719			
		"	/19			
F 2	Backfilling:	m³	1.024			
53	Using the excavated material	rii-	1 034			
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ĭ		Unit	Quantity _I	Rate	Amount
	Using imported selected material:				
54	From commercial sources (G7 material)	m³	719		
	Concrete pipe culverts:				i
	On Class B bedding				
55	300ND class 100D	m	292		
56	450ND class 100D	m	711		
57	600ND class 75D	m	83		
58	750ND class 50D	m	25		
	On Class C bedding				
59	600ND class 75D	m	83		
60	750ND class 50D	m	75		
ļ	Extra over items C3.2.3, C3.2.4 and C3.2.5 for constructing inclined culverts				
61	300ND class 100D	m	15		
62	450ND class 100D	m	36		
63	600ND class 75D	m	17		·
64	750ND class 50D	m	10		
	Cast-in-situ concrete and formwork:				
65	In complete in–situ floor slabs for rectangular culverts, manholes and catchpits including formwork, joints and Class				
	U2 surface finish (class 25MPa/19mm concrete) (installed at				
	depths up to of 2,0 m)	m³	35		
66	In roof slabs for rectangular culverts and manholes, excluding formwork but including Class U2 surfacing finish and joints				
	(class 25MPa/19mm concrete)	m³	8		
67	In inlet and outlet structures including kerbs, chutes and				
	downpipes, skewed ends, catchpits, manholes, thrust and anchor blocks, brick cavity in–fill, aprons, excluding formwork				
	but including Class U2 surfacing finish (class 25MPa/19mm				
	concrete)	m³	39		
	Reinforcement:				
	Mild steel bars.	Tonnes	1.20		
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		Unit	Quantity ,	Rate	Amount
69	High-tensile steel bars.	Tonnes	12.20		
70	Welded steel fabric.	Tonnes	2.05		
	Brickwork:				
71	115 mm thick (face bricks to architect specifications)	m²	1 200		
72	230 mm thick (face bricks to architect specifications)	m²	480		
73	230 mm thick (Extra hard burnt engineering bricks)	m²	665		
74	345 mm thick (Extra hard burnt engineering bricks)	m²	177		
75	Benching	m³	82		
	Accessories:				
76	Manhole frames (Heavy duty precast concrete)	No	54	;	
77	Manhole covers (heavy duty precast concrete)	No	54		
78	Step irons (Hot dip galvanised mild steel)	No	496		
79	Field inlet top structure, complete with roof, columns and apron, as detailed excluding the shaft and junction chamber	No	3		
80	4m long kerb inlet top structure complete as detailed, including kerb transitions, kerb channel, Roof, roof support, floor and walls but excluding manhole shaft and junction				
	chamber	No	15		
	Cutting of concrete pipes (diameter indicated):				
81	300ND class 100D	No	15		
82	450ND class 100D	No	34		
83	600ND class 75D	No	. 8		
84	750ND class 50D	No	4		
	Compaction of bedding for inlets, outlets, manholes and catchpits:		·		
85	Extra-over sub-item C3.2.24.1 for compaction to 93 $\%$ of MDD (depth indicated)	m³ :	163		
	CONCRETE KERBING AND CHANNELLING, ASPHALT BERMS, CHUTES, DOWNPIPES, CONCRETE, STONE PITCHED AND GABION LININGS FOR OPEN DRAINS		···.		
į	Concrete kerbing:	.*-	-		
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Unit Quantity Rate

	Prefabricated kerbing (description of type of kerb and bedding with reference to drawing):		٠.
86	Semi-mountable (Fig 7, SANS 927)	m	3 136
87	Side walk edge beam (Fig 10, SANS 927)	m	1 479
	Cast-in-situ kerbing:		!
88	200mmx150mm Class 25MPa/19mm kerb channel	m	1 049
89	300mmx200mm Class 25MPa/19mm V-drains	m	70
	Extra over items C3.3.1 and C3.3.2 for concrete kerbing or concrete kerbing and channelling on curves:		
	On curves of radii more than or equal to 5,0 m but less than 20,0 m		
90	Semi-mountable (Fig 7, SANS 927)	m	470
91	Side walk edge beam (Fig 10, SANS 927)	m	222
92	200mmx150mm Class 25MPa/19mm kerb channel	m	157
	On curves with radii more than or equal to 1,0 m but less than 5,0 m		34 · · · · · · · · · · · · · · · · · · ·
93	Semi-mountable (Fig 7, SANS 927)	m	157
94	Side walk edge beam (Fig 10, SANS 927)	m	74
95	200mmx150mm Class 25MPa/19mm kerb channel	m	52
	On curves with radii less than 1,0 m		* *
96	Semi-mountable (Fig 7, SANS 927)	m	63
97	Side walk edge beam (Fig 10, SANS 927)	m	30
98	200mmx150mm Class 25MPa/19mm kerb channel	m	21
99	Extra over item C3.3.2 for drop kerbs at pedestrian crossings and driveways	m	16
	Concrete chutes (typical designs):		
100	Prefabricated concrete chutes (200mm wide Vanstone D6 channels)		227
		m	237
	Prefabricated concrete chutes (500mm wide Vanstone D10 channels)	m	465
	300ND precast concrete Salberg slotted drain	m	402
0 2	Soons precast conference salberg stocked areas.	*:	e i
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		Unit	Quantity	Rate	
	Linings for open drains:				
	Cast-in-situ concrete lining (class 25MPa/19mm concrete trapezoidal drains)	m³	83		
	Class U2 surface finish to cast-in-situ concrete (trapezoidal drain)	m²	825		
	Stone pitched lining (300 mm thickness):				
1051 0 5	Grouted stone pitching (trapezoidal drains)	m²	266		
	Formwork to cast-in-situ concrete lining for open drains (Class F2 surface finish):				
106	To sides with formwork on the internal face only	m²	66		
1071 0 7	To ends of slabs	m²	28		
	Couled averaging injusting apparatuland atoms witched livings				
	Sealed expansion joints in concrete and stone pitched linings of open drains	m²	218		
1091 0 9	HDPE sheeting (0.15mm thickness) for lined open drains	m²	1 091		
	Energy dissipaters in outlet structures:				
1101 1	Stones set in outlet structures	m²	1.50		
0					
	CUT MATERIALS				
	Compiling and implementing M&U plans for the cuttings:				
1111 1 1	Cuttings exceeding 10 000 m³ up to 20 000 m³	No	1		
	Additional material investigations during the supplementary exploration:				
	Cost of additional trial pits and / or drilling and laboratory testing.	Prov Sum			
1131	13	Handling	; costs and p	profit in respect of item C	24.2.2.1
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% 50 000

	% 50 000				nount
	Excavating of materials in cuttings, material obtained from	ı:			nount
114	Soft excavation	m³	3 150		
115	Boulder excavation class A	m³	1 260		
1					
	Excavate material to spoil in sites designated by the Contractor, material obtained from:				
116	Soft excavation, overburden and unsuitable material	m³	1 890		
1					
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		Unit	Quantity	Rate
117	Boulder excavation class A	3	2.450	
		m³	3 150	
	1 Hard excavation (by blasting) 1	m³	3 150	
;	8			
	Backfilling of the unavoidable overbreak in hard and boulder excavation:	· .		
:	1 Compliant gravel material L 9	m³	630	
120: 2		m³	945	
	Finishing the side slopes:			
	Cuttings:			
121	In boulder material class A and B	m²	1 600	
1221 2 2		m³	1 800	
	In soft material using labour enhanced methods of construction	m²	1 300	
	COMMERCIAL MATERIALS			
	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers:			
	Pavement layer material:			
124	Type G5B material	m³	3 049	
125	Type G6 material	m³	2 504	
1261 2 6	Type G7 materials	m³	1 215	
	Natural or crushed gravel material (G7) for an unsealed shoulder layer	m³	608	
	Fill material in the earthworks:			
1281 2 8	Normal or coarse fill	m³	12 700	
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- 1	Cementitious stabilising agents:		I	1	II Amount	1
129	Cement	Tonnes	134			
	Sampling and material testing by a commercial laboratory for the stabilisation designs:					
130	Cost of sampling and material testing	Prov		i		
φ φ		Sum				
1311	Handling cost and profit in respect of item C4.4.7.1	%	50 000			
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Unit Quantity

Rate

	ROADBED		
	Construction of the roadbed in collapsing soil:		
	Non wetting-up collapsing soil roadbed construction at in-situ moisture content using HEIC	m³	18 413
	Construction of a levelling layer:		
	Over roadbed treatment in hard material compacted to 90 $\%$ MDD	m³	483
	<u>FILL</u>		
	Compiling and implementing M&U plans:		
134	For fills more than 10 000 m³ (list all fills separately)	No	1
	Fill construction:		
	Normal fill material in compacted layer thicknesses of 200 mm and less:		
	Compacted to 90 % of MDD	m³	19 877
3 5			
	Coarse fill material in compacted layer thicknesses exceeding 200 mm: but less than 500 mm:		
136	Compacted to 90 % of MDD	m³	3 100
137	Rock fill material all as per Clause A5.2.7.6	m³	1 000
138	Correcting rock fills that are deficient in fine material, extra over C5.2.2.4	m³	167
	Fill in sidewalk:		
1391 3 9	Fill material in sidewalk compacted to 93 % of MDD	m²	1823
	Breaking down oversize fill material on the road:		
1401 4 0	By normal grid rolling as per clause A5.3.7.3b) (i) to (vii)	m2/pass	3 100
1411 4 1	Removal of oversize material	m³	205
	Finishing-off fill slopes, medians and interchange areas:		
	Fill slopes	m²	6 600
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	ROAD PAVEIVIENT LAYERS		1	1	_{II} Amount	1
143	Compiling and implementing M&U plans for the construction of all the pavement layers	No	1		;	
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Unit Quantity

Rate

	Construction of pavement layers:		
	Construction of layers using conventional construction methods:		
	Lower selected subgrade layer (layer thickness indicated) compacted to 95 % of MDD	m³	2 210
	Gravel shoulder layer (150mm layer thickness) compacted to 95 % of MDD	m³	608
146	Lower subbase gravel layer (unstabilised) (layer thickness indicated) compacted to 95 % of MDD	m³	1 215
147	Upper subbase gravel layer (chemically stabilised) (layer thickness indicated) compacted to 97 % of MDD	m³	2 644
	Riding quality measurements:		
1481 4 8	Using a 3,0 m straight edge	km	
1491 4 9	Using a rolling straight edge	km	1
	<u>STABILISATION</u>		
	Pre-treatment of gravel layers:		
150	Pre-treatment of (insert layer thickness) gravel layer	m³	2 644
	Chemical stabilisation:		
	Chemical stabilisation (layer thickness indicated) of pavement layers (layer to be stabilised indicated)	m³	2 644
	Cementitious stabilisation agents for pavement layers:		
	Addition of cementitious stabilisation agents (specify agent separately) for pavement layers and spreading the agent using bags and labour enhancement methods:		
1521 5 2	Cement (for pavement layer)	Tonnes	146
1531 5 3	Provision and application of water for curing	Kilo litre	407

SEGMENTAL BLOCK PAVING LAYERS

Segmental block paving:

154154

Section No. 3 Bill No. 1

Earthworks, Roads, Stormwater

LIMPOPO PROVINCIAL THEATRE Concret Amount e block paving (60mm 16 713 thicknes s) 1551 Concrete block paving (80mm thickness) m² 4 200 1561 Cast-in-situ concrete edge and intermediate beams m³ Carried to Collection R Section No. 3 Bill No. 1 Earthworks, Roads, Stormwater 166

		Unit _I	Quantity	Rate	Amount	
	Provision and application of approved herbicide and ant poison:					
1571	Provision of materials	Prov				
5		Sum				
ĺ						
1581	Provision of materials.	Prov				
5		Sum				
8						
150	Contractor's charges and profit added to the prime cost sum	%	30 000			
159		,,	50 000			
	Re-sanding of joints in segmental block paving:	-	46 7740			
160	Concrete BRICK paving (80mm thick blocks)	m²	16 713			
1611	Concrete block paving (indicate class, type and thickness of		:			
6 1	blocks)	m²	4 200			
Ī	The second secon					
	PROTECTION AGAINST EROSION					
	Foundation trenches for stone masonry walls:					
1621	Excavating foundation trenches in soft material using labour					
6	enhanced construction methods	m³	120			
Ī						
	Stone pitching:	2	200			
163	Grouted stone pitching with mortar	m² l	266			
	Riprap:					
	Filter layer consisting of:					
1641	Geotextile (non-woven, Bidim A4)	m²	266			
4						
	Provision of approved herbicide and ant poison:					
1651	Provision of materials	Prov	÷			
1001	i Provision of materials	Sum				
5						
166	Provision of materials.	Prov Sum				
		34				
167	Contractor's charges and profit added to the prime cost sum	%	0			
	Section No. 3	,				
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I						

ROAD RESTRAINT SYSTEMS

Erecting of guardrails at 3,81 m spacing:

Carried to Collection

R

Section No. 3 Bill No. 1 Earthworks, Roads, Stormwater

Unit Quantity

Rate

	Complete galvanized system compliant to SANS 1350:		
1681 6 8	On timber posts (drawing reference)	m	284
6	Extra over C11.4.1.1(a) and C11.4.1.1(b) for excavating holes of posts using labour enhanced methods (soft and intermediate)	m	284
	Terminal sections for 3,81 guardrails comprising of:		
1701 7 0	End wings to SANS 1350	No	8
U			
171	End treatments where single guardrail sections are specified (drawing reference)	No	1
172	Extra over C11.4.1.2(d) and C11.4.1.2(e) for excavating holes for posts using labour enhanced methods (soft and intermediate)	No	50
	Extra over for horizontally curved guard rails:		
	Extra over C11.4.2.1(a) for horizontally curved guard rails factory bent to a radius of less than 45 m	m	120
	Additional guardrail posts for 3,81 m systems:		
174	Timber	No	31
	Reflective plates:		
175	Steel plates	No	57
	Extra over items C11.4.1 and C11.4.2 for drilling and blasting holes for guardrail posts	No	10
1771 7 7	Nailing of gang nail plates on top of timber guardrail posts	No	71
·	C11.5 FENCING		
	0110 / 1.101110		
	Supply and erect new fencing material for new fences and for supplementing material in existing fences which are being repaired or removed:		
178	for supplementing material in existing fences which are	km	1.30
178 179	for supplementing material in existing fences which are being repaired or removed: 6-strand electrical fencing complete as detailed on the	km m²	1.30 3 900
	for supplementing material in existing fences which are being repaired or removed: 6-strand electrical fencing complete as detailed on the drawings and fixed to mesh fencing posts Painted and PVC-coated heavy security mesh panels as detailed on the drawings Section No. 3		

801	Hot dip galvanised and painted posts, 3m long, including		1	1	_I Amount _I	
8	Hot dip galvanised and painted posts, 3m long, including mesh fixing, all as detailed on the drawings	No	450			
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	Earthworks, Roads, Stormwater					
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		Unit	Quantity _I	Rate	II Amount
	Straining posts, stays and anchors:				
	Vertical:				
	. 100 x 100 x 3 x 3700 square hollow section gate post s complete with stop guides, cap, galvanised anchor rod, and				
]	welded to mesh fence post, all as detailed on the drawings	No	12		
182	100 x 100 x 4 x 3700 square hollow section sliding gate guide				
102	post (double column) complete with cap, galvanised anchor				
	rods, stopping blocks and connected roller guides, all as detailed on the drawings	N	2		
	detailed on the drawings	No	3		
183	100 x 100 x 4 x 37000 square hollow section stopping post complete with cap, galvanised anchor rods and stop guides,				
	all as detailed on the drawings	No	3		
	Horizontal:				
19/1	Anti-climb over spike rail, 40 x 20 x 40 x 2.5mm thick,				
	fabricated from 100mm wide sheet metal fixed to the mesh				
4	panel all as detailed in the drawings	m	1 300		
1851	Extra over items C11.5.1.3; C11.5.1.4 and C11.5.1.6 for	,			
8	trenching, 300mm deep	m	1 300		
J					
	New gates				
186	10.3 x 2.725m sliding gate complete with frame, gear rail, mesh, mesh connectors, anti–climb over, rollers, all as				
	detailed on the drawings	No	3		
1871	20m sliding gate rail system complete as detailed on the				1
8	drawings, including flat bar, angle iron rail and fish tails,	No	3		
,					
1881	850 x 750mm Cast in–situ concrete support beam for sliding gate rail, including excavation, formwork, concrete, surface				
8	finish, chamfering and reinforcement, all as detailed on the				
	drawings	m	60		
189	2650 x 1200 pedestrian swing gate complete with frame,				
	mesh, mesh connectors, anti-climb over, hinges, slide bolt and lock, all as detailed on the drawings.	N	3		
	and lock, all as detailed off the drawings.	No			
190	Drilling and blasting holes for posts and anchors	No	460		
	Section No. 3 Bill No. 1				
	Earthworks, Roads, Stormwater				
	171				

Section No. 3
Bill No. 1
Earthworks, Roads, Stormwater

		Unit	Quantity _l	Rate	. Amount
	Posts fixed horizontally to the bottom of wire mesh for the closing of openings under fences:				
191	Open drain screen system including channel profile, sikatop infill, galvanised pipes installed at 150mm intervals, all as detailed on the drawings	m	30		
192	Gate motor (Centurion D20 industrial) completely installed and connected to electricity supply	No	3		
	ROAD SIGNS				
	Regulatory signs, permanent:				
193	600 mm diameter (signboard material, background and symbol retro-reflective class indicated)	No	20		
	Warning signs, permanent:				
194	600 mm size (signboard material, background and symbol retro-reflective class indicated)	No	5		
195	Supplementary plates to permanent regulatory or warning signs (signboard material, background and symbol retro-reflective class indicated)	m²	2		
	Extra over on item C11.6.1 for using:				
	Background of retro-reflective material:				
196	Class I	m²	7		
197	Class III	m²	5		
	Lettering, symbols, numbers, arrows, emblems and borders of retro-reflective material:				
198	Class III	m²	3		
	Road sign supports (overhead road sign structures excluded):				:
199	Steel tubing (76mm dia D-section, hot-dip galvanised, 2,0 mm thickness, painted grey).	Tonnes	0.30		
	Excavation and backfilling for road sign supports (not applicable to kilometre posts):				
200	Excavating soft or intermediate material and backfilling using labour enhanced construction methods	m³	5		
201	Extra over item C11.6.5.1 and 2 for cement-treated soil backfill	m³	1		
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	Section No. 3				
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	Earthworks, Roads, Stormwater				
ļ	173				II I

		Unit	Quantity	Rate	Amount	
	Danger plates at culverts / structures:					
202	Size 150 x 600 mm (state post type and reflective material)	No	8			
	ROAD MARKINGS AND ROAD STUDS					
	Road marking:					
203	Temporary labour enhanced hand painted white lines broken or unbroken	m²	150			
204	Temporary labour enhanced hand painted yellow lines broken or unbroken	m²	75	·		
205	Temporary labour enhanced hand painted white lettering and symbols	m²	30			
206	Temporary labour enhanced hand painted yellow lettering and symbols	m²	6		1	
207	Temporary labour enhanced hand painted transverse lines, painted island and arrestor bed markings (any colour)	m²	35			
208	Permanent Labour enhanced hand painted kerb markings (BTP 28 (black) and BTP 1 (white) Plascon brick and concrete marking paint)	m²	3			
	Thermoplastic road marking (1.2mm thick):					
	Thermoplastic road marking, broken or unbroken with glass beads at 35% application rate:					
209	100mm White lines	km	1.00			
210	200mm White lines	km	0.10			
211	300mm White lines	km	0.10			
212	100mm Yellow lines	km	0.50			
	Cold plastic material, MMA - Methyl methacrylate applied as a screed (1mm thick):					
213	White lettering and symbols	m²	30			
214	Yellow lettering and symbols	m²	7			
215	Transverse lines, painted island and arrestor bed markings (any colour)	m²	40			
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	Section No. 3					-
	Bill No. 1					
	Earthworks, Roads, Stormwater 174					
1		'	'		•	

	I	Unit	Quantity	Rate	Amount
	Road studs:				
216	•	No	30		
217	Provision of temporary road studs	No	1		
218	Handling cost, profit and all other charges of sub item		_		
210	C11.7.7.5	%	4 000		
219	Installation only of temporary stick on road studs (including				
	removal)	No	30		
220	Setting out and premarking the lines (excluding traffic island				
ı	markings, lettering and symbols)	km	2		
221	Re-establishing the painting unit during the defects				
	notification period and at other instances on instruction of the Engineer	No	1		
	Removal of existing, temporary or final road markings by:	110			
222	Sandblasting	m²	250		;
			230		
	LANDSCAPING AND PLANTING PLANTS	`			
222	Trimming:	2	0.460		
223	Hand trimming	m²	8 162		
	Preparing the areas for grassing:				
	Topsoiling within the road reserve where the following materials are used:				
224	Topsoil obtained from commercial sources by the Contractor	m³	1 632		
	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
	Finishing the road and road reserve:				
225	Entire site.	Hect	4.50		
	SLOPE PROTECTION MEASURES				
226	Barring down of rock surfaces within vertical height intervals				
	(intervals stated)	m²	1 800		
227	Cleaning of rock surfaces by high pressure air and water				
	jetting equipment within the vertical height intervals (categories stated)	m²	1 800		
	•				
228	Disposal of barred down and accumulated debris	m3-km	360		
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	Bill No. 1 Farthworks Roads Stormwater		-		
	Earthworks, Roads, Stormwater 175				
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ı		Unit	Quantity	Rate	Amount
	HARD EVEN VATION BY BLASTING				
229	HARD EXCAVATION BY BLASTING Excavation in hard rock using controlled blasting techniques	m³	6 600		
229	Excavation in hard rock using controlled blasting techniques	mı	0000		
	TESTING MATERIALS AND JUDGEMENT OF WORKMANSHIP				
	Special tests requested by the Engineer:				
	Employer's contribution to other special tests:				
230	Specify test	Prov Sum			
231	Handling costs and profit in respect of item C20.1.2.2(a)	%	100 000		
:					
	Carried to Collection			R	
	Section No. 3				
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	Earthworks, Roads, Stormwater				
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		Amount
BILL NO. 1		
EARTHWORKS, ROADS, STORMWATER		
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Earthworks, Roads, Stormwater 177		

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Section No. 3 Bill No. 1			
Earthworks, Roads, Stormwater			
178 187		1	

ı		Unit	Quantity	Rate	Amount
	SECTION NO. 3				
	EXTERNAL WORKS				
	BILL NO. 2				
	BOREHOLE AND RISING MAIN				
	PREAMBLES	·			
	The contractor is referred to the Model Preambles for Trades (2008 Edition) as issued by the Association of South African Quantity Surveyors before pricing this bill				
	BOREHOLE AND RISING WATER MAIN				
	Trench Excavations:				
1	(a) Soft excavation	m³	105		
2	(b) Intermediate excavation	m³	210		
3	(c) Hard Rock excavation	m³	314		
	Backfilling:	•			
4	(a) Bedding Cradle – Class C as per drawing LDPWRI– PROF/18002/2021/02 – DT–001–PD	m³	70		
5	(b) Compacted Selected Fill Blanket — Class C as per drawing LDPWRI—PROF/18002/2021/02 — DT-001—PD	m³	206		
6	(c) Main Fill - Class C as per drawing LDPWRI- PROF/18002/2021/02 - DT-001-PD	m³	353		
	Pipes and Structures:				
7	(a) 90mm Diameter HDPE PN10	m	908		
8	(b) Valve chambers to Civil Engineer's details	No	15		
9	(c) Water Meters – for a 90mm PN10 HDPE water pipeline	No	2		
10	(d) Isolation Valves – for a 90mm PN10 HDPE water pipeline	No	4		
11	(e) Non-Return Valves – for a 90mm PN10 HDPE water pipeline	No	3		
12	(f) Air Valves – for a 90mm PN10 HDPE water pipeline	No	3		
13	(g) Scour Valves – for a 90mm PN10 HDPE water pipeline	No	3		
13	(g) scoul valves for a sommittee file, 2 trase, p.p.				
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	Section No. 3				
	Bill No. 2				
	Borehole And Rising Main				
	179				

		Unit	Quantity	Rate	Amount	
	BUDGETARY ALLOWANCES					
	Borehole:					
14	Provide the sum of R50 000.00 (Fifty Thousand Rand) for borehole siting	ltem				
15	Provide the sum of R600 000.00 (Six Hundred Thousand Rand) for Borehole drilling, Casing, Yield testing and Water quality analysis (120m depth)	ltem				
16	Provide the sum of R150 000.00 (One Hundred and Fifty					
	Thousand Rand) for Pump House.	Item				
				-		
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	Section No. 3 Bill No. 2					
	Borehole And Rising Main					
	180					

	1	l Amount	
BILL NO. 2			
BOREHOLE AND RISING MAIN			
COLLECTION			
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Bill No. 2			
Borehole And Rising Main			
121			

-		Unit I	Quantity	Rate	Amount
	SECTION NO. 3				
	EXTERNAL WORKS				
	BILL NO. 3				
	SEWER INSTALLATION				
	PREAMBLES .				
	The contractor is referred to the Model Preambles for Trades (2008 Edition) as issued by the Association of South African Quantity Surveyors before pricing this bill	:	·		
İ	EXTERNAL SEWER INSTALLATION				
	Trench excavations:				
1	(a) Soft excavation	m³	182		
2	(b) Intermediate excavation	m³	364		
3	(c) Hard Rock excavation	m³	545		
	Backfilling:				
4	(a) Bedding Cradle – Class C as per drawing LDPWRI–				
	PROF/18002/2021/02 - DT-001-PD	m³	55		
5	(b) Compacted Selected Fill Blanket – Class C as per drawing LDPWRI-PROF/18002/2021/02 – DT-001-PD	m³	162		
6	(c) Main Fill - Class C as per drawing LDPWRI-				
	PROF/18002/2021/02 - DT-001-PD	m³	884		
	Pipes and structures:				
7	(a) 160mm Diameter Upvc Class 34	m	617		
8	(b) 1 000 mm Pre-Cast Concrete Manhole	No	12		
	Carried To Section Summary			R	
	Section No. 3				
	Bill No. 3 Sewer Installation				
	182				

			Amount	
	SECTION NO. 3			
	EXTERNAL WORKS			
	SECTION SUMMARY	_		
Bill No.		Page		
1	EARTHWORKS, ROADS, STORMWATER	167		
2	BOREHOLE AND RISING MAIN	170		
3	SEWER INSTALLATION	171		
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	Carried to Final Summary	R		
	Section No. 3 SECTION SUMMARY			
	183			

SECTION NO. 4 ELECTRICAL INSTALLATION

	1164	Quantity ,	Rate	Amount	TEMTINE
	Unit	Quantity	Rate	Amount	
SECTION NO. 4					
ELECTRICAL INSTALLATION					
BILL NO. 1					
SUPPLEMENTARY PREAMBLES					
BILL PREAMBLES & BILL OF QUANTITIES		-1 2			
General Notes					ļ
This Bill of Quantities forms part of, and must be read in conjunction with the specifications					
The quantities given in the Bill for cables, cable markers, earth wire laid with cables, overhead conductors, overhead earth wires and					
excavations cannot be regarded as exact and are subject to measurement on site after completion of the service and adjustments will					
be made according to the unit rates given in the bill.					
In the event of discrepancies between the drawings, specifications and Bill of Quantities, the Engineer shall decide whether the work as					
executed shall be remeasured on site or whether remeasurement shall be effected from the working drawings only.					
NOTE:					
Checking of Cable Lengths					
Notwithstanding the fact that the lengths of cables as given in the Bill of Quantities have been measured from scaled drawings, the contractor					
shall check such lengths on site before ordering the cable as he / she will not be paid for excess cable after the completion of the service					
Any allowance for off-cuts shall be made in the unit rates. The final measurements shall be based on the nett route length of the cables					
and overhead lines concerned.					i i
Checking of quantities for other materials					
Notwithstanding the fact that the quantities for light fittings, switches, socket outlets and isolators as given in the Bill of Quantities have been					
					<u> </u>
Carried to Collection			R		
Section No. 4					
Bill No. 1					
Supplementary Preambles					
185		1		11	1

		Unit	Quantity	Rate II	Amount	
İ	measured from site inspections, the contractor shall check such lengths/quantities on site before ordering as he / she will not be paid for					
	excess quantities after the completion of the service. Any ambiguous or dubious wording or quantities must be cleared with the responsible					
	Engineer before work is started. Wrong interpretation of the specification and / or drawings and Bill of Quantities, resulting in alterations					
	and/or additional costs, is solely the responsible of the contractor.					
	Where alternative prices for the switchgear (where applicable) of different manufacture are quoted the lowest alternative price for switchgear				ſ	
	as per the specification must be quoted against the relevant item in the Bill of Quantities. The remaining alternative prices must be furnished					
	separately					
	The unit prices quoted in the Bill of Quantities must include all installation materials as are required for the complete installation in accordance		:			
	with the specification.					
	All equipment, components and material shall be new, unused and best quality and shall comply with the relevant current specifications of					
	the SABS, SANS and as stated in this document, wherever possible, be of South African manufacture.			:		
	No alteration, erasure or addition is to be made in the text of the Bill of Quantities. Should any alteration, erasure or addition be made, it will					
	not be recognised but the original wording of the Bill of Quantities will be adhered to.					
	The Engineer will check the completed Bill of Quantities and reserves the right to adjust any individual price and to rectify any discrepancy			i		
	whilst the total tender price as quoted remains unaltered.					
	Electrical materials associated with the building, for example conduit accessories and wiring accessories, will not be remeasurable and the					
	Carried to Collection		!	R		
	Section No. 4					+-
	Bill No. 1					
	Supplementary Preambles					
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tenderer must therefore allow for the supply of all necessary accessories of materials for the successful execution and completion of the installation. The unit rate for each item in the Bill of Quantities shall include for all materials, labour, profit, transport, etc., everything necessary for the execution and complete installation of the work. The Bills of Quantities shall not be used for ordering purposes. The contractor shall check the lengths of tables, overhead conductors, materials, light fitting quantities, switches, socket outlets and isolators on site before ordering any of these Any allowance for off-cuts of cables shall be made in the unit rates. The rates shall exclude Value-Added Tax (VAT) and the total carried over to the final summary. The contractor is required to label all distribution boards, supply and install all dianger warning signs, label all switches, socket outlets and isolators etc. and all costs shall be deemed to have been provided for and included in the unit rates and sum amounts tendered for the items scheduled in the Bill of Quantities and separate additional payment will not be made. Black (ink shall be used for pricing the document, any other prices marked in other colours or pencil shall not be considered for the total price of the bill. Contractor's Name					OPO PROVINCIAL TH	EAIKE
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The unit rate for each item in the Bill of Quantities shall include for all materials, labour, profit, transport, etc., everything necessary for the execution and complete installation of the work in accordance with the description of the works. The Bills of Quantities shall not be used for ordering purposes. The contractor shall check the lengths of cables, overhead conductors, materials, light fitting quantities, switches, socket outlets and isolators on site before ordering any of these Any allowance for off-cuts of cables shall be made in the unit rates. The rates shall exclude Value-Added Tax (VAT) and the total carried over to the final summary. The contractor is required to label all distribution boards, supply and install all danger warning signs, label all switches, socket outlets and isolators etc. and all costs shall be deemed to have been provided for and included in the unit rates and sum amounts tendered for the items scheduled in the Bill of Quantities and separate additional payment will not be made. Black ink shall be used for pricing the document, any other prices marked in other colours or pencil shall not be considered for the total price of the bill. Contractor's Name:	accessories of materials for the successful execution and			,		
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Contracting Board of South Africa:	Contractor's Name:					
Name of Registered Person / Firm at ECB:	Contracting Board of South					
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SUPPLEMENTARY PREAMBLES		
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			_		OPO PROVINCIAL THEAT	INE
1		Unit	Quantity	Rate	Amount	
	SECTION NO. 4					
	ELECTRICAL INSTALLATION					
	BILL NO. 2					
	SITEWORKS					
	LV Network and Site Works					
1	Municipal Application –Allow an application for Gas Insulated Ring Main Unit – 22kV, complete with HT metering, Concrete					
	Plinth, Labelling and other accessories. complete with					
	Concrete Plinth, Labelling and other accessories	No	1			
2	Allow an application, supply, delivery, installation and					
	commissioning of a 1000KVA/22kV, 420/242V, 3–50Hz, Free Air Cooling Miniature Substation complete with Concrete					
	Plinth, Labelling and other accessories	No	1			
3	Allow an application, supply, delivery, installation and					
3	commissioning of a 500KVA/22kV, 420/242V, 3–50Hz, Free Air					
	Cooling Miniature Substation complete with Concrete Plinth,					
	Labelling and other accessories	No	1			
4	Supply, Delivery, Installation and Commissioning of a					
	800kVA/22KV Silent Type Standby Generator Complete with Auto Change Control Panel, 1000lt Fuel Tank, Extra Heavy					
	Duty Battery, Vibration Resistance Sealed Maintenance Free					
	and Concrete Plinth.	No	1			
	MAIN DISTRIBUTION KIOSK					
	Supply and installation of a main distribution kiosk					
	complete with concrete plinth refer to Drawing	NI.	1			
5	KIOSK 1 (Main Kiosk) - refer to drawing No.	No				
6	KIOSK 2 (HVAC) - refer to drawing No.	No	1			
7	KIOSK 3 (Area Lighting) – refer to drawing No.	No	1			
	LOW VOLTAGE CABLES					
	Supply and install the following PVC/SWA/PVC cables in the position as indicated on the drawings.	- :				
8	240mm2 4-core	m	340			
9	185mm2 4-core	m	510			
10	150mm2 4-core	m	155			
10	130HHI2 4-core					
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	Siteworks					
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11 95mm2 4-core	1		Unit	Quantity	Rate	Amount
12 95mm2 4-core		en de la companya de la companya de la companya de la companya de la companya de la companya de la companya de				
13 SOmm2 4-core	11		m	200		
14 35mm2 4-core m 285 15 25mm2 4-core m 118 16 16mm2 4-core m 420 17 10mm2 4-core m 64 18 6mm2 4-core m 54 19 4mm2 4-core m 55 20 2.5mm2 4-core m 55 21 10mm2 3-core m 55 22 6mm2 3-core m 50 EARTH WIRE Supply and install the following bare stranded copper earth wire strapped to the relative cable at 1000mm Intervals 23 120mm2 m 510 25 70mm2 m 155 26 50mm2 m 200 27 35mm2 m 311 28 25mm2 m 311 28 25mm2 m 403 30 10mm2 m 420 31 6mm2 m 403 30 10mm2 m 420 31 6mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55 Carried to Collection R Section No. 4 Bill No. 2 Siteworks	12	70mm2 4-core	m	311		
15	13	50mm2 4-core	m	210		
16 16mm2 4-core m 420 17 10mm2 4-core m 64 18 6mm2 4-core m 54 19 4mm2 4-core m 35 20 2.5mm2 4-core m 55 21 10mm2 3-core m 50 22 6mm2 3-core m 50 EARTH WIRE Supply and install the following bare stranded copper earth wire straped to the relative cable at 1000mm Intervals 23 120mm2 m 510 25 70mm2 m 510 26 50mm2 m 200 27 35mm2 m 311 28 25mm2 m 311 28 25mm2 m 403 30 10mm2 m 403 31 10mm2 m 403 31 6mm2 m 403 32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55 Carried to Collection R	14	35mm2 4-core	m	285		
17 10mm2 4-core	15	25mm2 4-core	m	118	1	
18 6mm2 4-core m 54 19 4mm2 4-core m 35 20 2.5mm2 4-core m 55 21 10mm2 3-core m 50 22 6mm2 3-core m 50 EARTH WIRE Supply and install the following bare stranded copper earth wire strapped to the relative cable at 1000mm intervals 23 120mm2 m 340 24 95mm2 m 510 25 70mm2 m 155 26 50mm2 m 200 27 35mm2 m 210 28 25mm2 m 210 29 16mm2 m 403 30 10mm2 m 403 30 10mm2 m 420 31 6mm2 m 64 32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55 Carried to Collection R Section No. 4 Bill No. 2 Siteworks	16	16mm2 4-core	m	420	-	
19 4mm2 4-core	17	10mm2 4-core	m	64		
20 2.5mm2 4-core	18	6mm2 4-core	m	54		
10mm2 3-core	19	4mm2 4-core	m	35	:	
EARTH WIRE Supply and Install the following bare stranded copper earth wire strapped to the relative cable at 1000mm intervals 120mm2 m 340 95mm2 m 510 50mm2 m 200 27 35mm2 m 311 28 25mm2 m 311 29 16mm2 m 403 10mm2 m 403 10mm2 m 420 31 6mm2 m 64 32 4mm2 m 54 33 2.5mm2 m 35 4 1.5mm2 m 35 Carried to Collection R B III No. 2 Section No. 4 Bill No. 2 Siteworks	20	2.5mm2 4-core	m	55		
EARTH WIRE Supply and install the following bare stranded copper earth wire strapped to the relative cable at 1000mm Intervals 23 120mm2 m 340 24 95mm2 m 510 25 70mm2 m 155 26 50mm2 m 200 27 35mm2 m 311 28 25mm2 m 210 29 16mm2 m 403 30 10mm2 m 420 31 6mm2 m 64 32 4mm2 m 64 33 2.5mm2 m 35 34 1.5mm2 m 55 Carried to Collection R Section No. 4 Bill No. 2 Siteworks	21	10mm2 3-core	m	50		
EARTH WIRE Supply and install the following bare stranded copper earth wire strapped to the relative cable at 1000mm intervals 23 120mm2 m 340 24 95mm2 m 510 25 70mm2 m 155 26 50mm2 m 200 27 35mm2 m 311 28 25mm2 m 210 29 16mm2 m 403 30 10mm2 m 403 31 6mm2 m 420 31 6mm2 m 64 32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 35 35 1.5mm2 m 55 Carried to Collection Section No. 4 Bill No. 2 Siteworks 190	22	6mm2 3-core				·
23 120mm2 m 340 24 95mm2 m 510 25 70mm2 m 155 26 50mm2 m 200 27 35mm2 m 311 28 25mm2 m 403 30 10mm2 m 420 31 6mm2 m 64 32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55 Carried to Collection R Section No. 4 8ill No. 2 Siteworks		EARTH WIRE	•:•		·	· .
23 120mm2 m 340 24 95mm2 m 510 25 70mm2 m 155 26 50mm2 m 200 27 35mm2 m 311 28 25mm2 m 210 29 16mm2 m 403 30 10mm2 m 420 31 6mm2 m 64 32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55 Carried to Collection R Section No. 4 Bill No. 2 Siteworks		Supply and install the following bare stranded copper earth			!	
25 70mm2 m 155 26 50mm2 m 200 27 35mm2 m 311 28 25mm2 m 210 29 16mm2 m 403 30 10mm2 m 420 31 6mm2 m 64 32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55 Carried to Collection R Section No. 4 Bill No. 2 Siteworks 190	23		m			
25 70mm2 m 155 26 50mm2 m 200 27 35mm2 m 311 28 25mm2 m 210 29 16mm2 m 403 30 10mm2 m 420 31 6mm2 m 64 32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55 Carried to Collection Section No. 4 Bill No. 2 Siteworks 190	24	95mm2	m	510		
26 50mm2 m 200 27 35mm2 m 311 28 25mm2 m 210 29 16mm2 m 403 30 10mm2 m 420 31 6mm2 m 64 32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55 Carried to Collection R Section No. 4 Bill No. 2 Siteworks	25	70mm2	m	155		
28 25mm2 m 210 29 16mm2 m 403 30 10mm2 m 420 31 6mm2 m 64 32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55 Carried to Collection R Section No. 4 Bill No. 2 Siteworks 190	26	50mm2		200		
29 16mm2 m 403 30 10mm2 m 420 31 6mm2 m 64 32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55	27	35mm2	m	311		
30 10mm2 m 420 31 6mm2 m 64 32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55	28	25mm2	m	210		
30 10mm2 m 420 31 6mm2 m 64 32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55 Carried to Collection R Section No. 4 Bill No. 2 Siteworks 190	29	16mm2	m	11.		
31 6mm2 m 64 32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55 Carried to Collection R Section No. 4 Bill No. 2 Siteworks 190	30	10mm2	m	420		
32 4mm2 m 54 33 2.5mm2 m 35 34 1.5mm2 m 55 Carried to Collection R Section No. 4 Bill No. 2 Siteworks 190	31	6mm2	m	64	l	
2.5mm2 m 35 1.5mm2 m 55 Carried to Collection R Section No. 4 Bill No. 2 Siteworks 190	32	4mm2		1		
Section No. 4 Bill No. 2 Siteworks	33	2.5mm2		35		
Section No. 4 Bill No. 2 Siteworks	34	1.5mm2	m	55		
Bill No. 2 Siteworks		Carried to Collection	e.	*	R	
Siteworks 190				,		
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ı		Unit	Quantity	Rate	Amount
	CABLES GLANDS	:			
	Supply and install the following cable glands including making off the cable		• 1		
35	185mm2 4-core	No	24		
36	150mm2 4-core	No	12		
37	120mm2 4-core	No	12		
38	95mm2 4-core	No	6	•	
39	70mm2 4-core	No	18		
40	50mm2 4–core	No	12		
41	35mm2 4–core	No	24		
42	25mm2 4–core	No	36		
43	16mm2 4-core	No	24		
44	10mm2 4-core	No	36		
45	6mm2 4-core	No	8		
46	4mm2 4-core	No	8		
47	2.5mm2 4-core	No	8		
48	10mm2 3-core	No	24		
49	6mm2 3-core	No	160		
	<u>SLEEVES</u>				
	Supply and install the following the glands cables including making off cables.		· ·		
50	160mm dia	m	180	:	
51	100mm dia	m	245		
52	75mm dia	m	150		
53	100mm dia bend	m	96		
54	75mm dia bend	m	36		
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1		Unit	Quantity	Rate	Amount
	TRENCHES	·			
	Excavation, smoothing out of trench, installing bedding and backfilling, compacting and making as specified.				
55	Earth	m³	200		
56	Soft Rock	m³	150		
57	Hard Rock	m³	150		
	CABLE MARKERS				
	Supply and installation concrete cable markers as indicated on site.				
58	Cable Makers	No	70		
	AREA LIGHTING				
	Supply and Install the following lights as indicated on the drawing complete with concrete and all accessories				
59	6m Mounting Height (6.9m Total Length) Galvanised Steel Streetlight Pole – Buried Hot Dip Galvanised and Powder Coated (Standard Colour) with Glandplate, Baseplate and MCB	D. I.	70		
	·	Rate only	38		
60	3m Mounting Height (4m Total Length) Galvanised Steel Streetlight Pole – Buried Hot Dip Galvanised and Powder Coated (Standard Colour) with Glandplate, Baseplate and MCB	Rate	32	:	
		only			
61	Floodlight LED Light Fitting – LEDLume 55W or similar	No	110		
62	Type I1: 56W, 740mm Vandal – Resistant Linear LED Luminaire complete with driver – similar to BEKA ROUGHDGAURD	No	100		
63	Type I1–E: 56W, 740mm Vandal– Resistant Linear LED				
	Luminaire complete with driver (Emergency) – similar to BEKA ROUGHDGAURD	No	90		
	MAIN HOLE DB				
	Build manholes in position as indicated on the drawing complete with lid as specified.				
64	600 x 600 x 700mm deep (power)	No	5		
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		Unit	Quantity ,	Rate	Amount	
		Offic	Quartity	nate	Amount	
65	300 x 300 x 500mm deep (tel/Data)	No	5			
	TELEPHONE AND DATA CUBICLES					
	Supply and install Telephone and data cubicles complete as shown on the drawing.					
66	Telephone and Data Cubicles (400 x 400 x 150 deep)	No	8			
	EARTHING AND LIGHTNING PROTECTION					
	Supply and install earthing and lighting protection for the buildings as specified.					
67	Lightning Protection	Item				
	AS BUILT DRAWINGS					
	Supply the electrical engineer with as build drawings as specified.					
68	As built drawings (3 set)	Item				
	<u>CABLE TRAY</u>					
	All prices shall include for supports and all other fixing materials as needed as no extra claims for above shall be entertained. Rates for this must however be provided where it is asked for.					
69	100mm Medium Duty Cable Tray	m	184			
70	150mm Medium Duty Cable Tray	m	242			
71	100mm Internal Bend	No	34			
72	100mm External Bend	No	34			
73	150mm Internal Bend	No	42			
74	150mm External Bend	No	42			
	CABLE LADDER					
	All prices shall include for supports and all other fixing materials as needed as no extra claims for above shall be entertained. Rates for this must however be provided where it is asked for.					
75	400mm Cable Ladders (Heavy Duty)	m	126			
76	400mm Heavy Duty cable ladder cover	m	126			
77	90 Bends (Heavy Duty)	No	16			
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l		Unit	Quantity	Rate	Amount	
78	Tee-offs (Heavy Duty)	No	10			
	Type J: 50W LINEAR LED LIGHT – similar to BERGSTORM KUMA	No	20			
80	Relocation of Existing Power Lines	Prov Sum				
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SITEWORKS			
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Section No. 4 Bill No. 2			
Siteworks			
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1		Unit _I	Quantity	Rate	Amount
	SECTION NO. 4				
	ELECTRICAL INSTALLATION				
	BILL NO. 3				
	LEVEL 1			!	
	FIRST LEVEL - 1381.5m				
	DISTRIBUTION BOARDS				
	Supply and Install the following boards complete with equipment as indicated on the drawings.				
1	DB -NW	No	1		
2	DB – SW	No	1		
3	DB – CW	No	1		
	LIGHTING INSTALLATION				
	Supply and installation of the following light fitting, complete with lamps and control gear			٧.	
4	Type B: 1200mmx600mm 65W LED Panel Ceiling Recessed	V . :	e Nysara ji e	4.75	
1	Luminaire fitted with Opal diffuser complete with driver	No	16		
5	Type B-E: 1200mmx600mm 65W LED Panel Ceiling Recessed Luminaire fitted with Opal diffuser complete with driver				
	(Emergency)	No	11		
6	Type E: Ceiling mounted watertight bulkhead fitted with 21W LED lamp – similar to BEKA Series 300	No	4		
7	Type E-E: Ceiling mounted watertight bulkhead fitted with 21W LED lamp – similar to BEKA Series 300 – Emergency	No	4		
8	Type G: 16W LED Ceiling Mounted Downlighter complete with driver – similar to RONDOmaxi	No	90		
9	Type G-E: 16W LED Ceiling Mounted Downlighter complete with driver – similar to RONDOmaxir (Emergency)	No	74		
10	Type G1: 7W LED Ceiling Mounted Downlighter complete with driver – similar to RONDOmidi	No	16		
11	with driver - similar to RONDOmidi (Emergency)	No	1.6		
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12	Type J: 50W LINEAR LED LIGHT – similar to BERGSTORM KUMA	No *:**	30			
13	Type W: 36W Decorative Bulkhead LED Light – similar to BEKA QVAL	No	-2			
14	Type H: Wall mounted watertight Bulkhead with 21W LED Lamp with Aluminium Base and Opal Diffuser	No	8			
15	Type BD: 16W LED DOWNLIGHTER (BLUE LIGHT) Light Fitting mounted on Soffit – similar to BEKARondo	No	-8	:		
16	Type GW: 16W LED DOWNLIGHTER (WARK WHITE) Light Fitting mounted on Soffit – similar to BEKARondo	No	8			
	SENSORS					
	Supply and install the following sensing equipment					
17	Occupancy Sensor	No	6			
18	Photo Cell	No	6			
ļ	STRONG ROOMS/STORE ROOMS					
19	Supply and install indicator lights	No	1 -			
	<u>LIGHT SWITCH</u>	ų.				
	Supply and install the following light switches complete with cover plate and wall boxes					
20	16A single lever	No	23			
21	16A two lever	No	4			
22	16A two way	No	9			
	SOCKET OUTLET					
	Supply and install the following socket outlets complete with cover plate and wall boxes					
23	16A 3-pin single	No	4			
24	16A 3-pin double	No	18			
25	Switched Socket 16A, 3 PIN + 2xEURO + 2xUSB Complete	No	34			
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	Level 1	j				
	197					

PVC INSULATED WIRE Supply and installation of the following 1000/600 grade PVC single core with colours into trunking and conduits including termination on both ends 25 2.5mm2 m 3 450 4mm2 m 3 200 8 6mm2 m 980 EARTHWIRE Supply and install the following Bare Copper Earth 1000/600 Grade conductor into trunking and conduits including termination on both ends 2 2.5mm2 m 6 650 4mm2 m 980 ISOLATORS Supply and install the following isolators with cover plates and wall boxes 3 20A 2-pole No 12 3 30A 2-pole No 12 3 30A 2-pole No 4 WORK STATION Supply and Install a workstation as indicated on the drawings complete with all accessories including, socket Outlet, 1 x Declicated Socket Outlet, Computer Point - Mounted on Power Skirting No 6 POWER SKIRTING Supply and install the following galvanise power skirting complete with computer Point - Mounted on Power Skirting m 26 Power skirting end caps Carried to Collection R 8 Section No. 4 Bill No. 3	1		Unit	Quantity	Rate	Amount
Supply and installation of the following 1000/600 grade PVC single core with colours into trunking and condults including termination on both ends 2.5mm2	Ì					
Supply and installation of the following 1000/600 grade PVC single core with colours into trunking and conduits including termination on both ends 2.5mm2		DVC INCLILATED WIDE				
single core with colours into trunking and condults including termination on both ends 2.5mm2						
27 4mm2 m 3 200 28 6mm2 m 980 EARTHWIRE Supply and install the following Bare Copper Earth 1000/600 Grade conductor into trunking and conduits including termination on both ends 29 2.5mm2 m 6 6550 30 4mm2 m 980 ISOLATORS Supply and install the following isolators with cover plates and wall boxes 31 20A 2-pole No 10 32 30A 2-pole No 12 33 63A 3-pole No 4 WORK STATION Supply and install a workstation as indicated on the drawings complete with all accessories including, 21 Tier Wall Box (275mmx157mm), 2 Tier Cover, 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point - Recessed in Wall No 2 35 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point - Mounted on Power Skirting No 6 POWER SKIRTING Supply and install the following galvanise power skirting complete with cover plates and accessories. 36 2 compartment, 3 Tier Power Skirting m 26 37 Power skirting end caps No 8		single core with colours into trunking and conduits including				
EARTHWIRE Supply and install the following Bare Copper Earth 1000/600 Grade conductor into trunking and condults including termination on both ends 2 2.5mm2 m 6 6550 30 4mm2 m 980 ISOLATORS Supply and install the following isolators with cover plates and wall boxes 31 20A 2-pole No 10 32 30A 2-pole No 12 33 63A 3-pole No 4 WORK STATION Supply and Install a workstation as indicated on the drawings complete with all accessories including, 34 2 Tier Wall Box (275mmx157mm), 2 Tier Cover, 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point - Recessed in Wall No 2 35 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point - Recessed in Wall No 6 POWER SKIRTING Supply and install the following galvanise power skirting complete with cover plates and accessories. 36 2 compartment, 3 Tier Power Skirting m 26 37 Power skirting end caps No 8	26	2.5mm2	m	3 450		
EARTHWIRE Supply and install the following Bare Copper Earth 1000/600 Grade conductor into trunking and condults including termination on both ends 29 2.5mm2 m 6 650 30 4mm2 m 980 ISOLATORS Supply and install the following isolators with cover plates and wall boxes 31 20A 2-pole No 12 33 30A 2-pole No 12 34 30A 2-pole No 4 WORK STATION Supply and install a workstation as indicated on the drawings complete with all accessories including, 34 2 Tier Wall Box (275mmx157mm), 2 Tier Cover, 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point - Recessed in Wall No 2 35 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point, Computer Point - Mounted on Power Skirting POWER SKIRTING Supply and install the following galvanise power skirting complete with cover plates and accessories. 2 compartment, 3 Tier Power Skirting m 26 77 Power skirting end caps Carried to Collection R Carried to Collection R	27	4mm2	m	3 200		
Supply and install the following Bare Copper Earth 1000/600 Grade conductor into trunking and conduits including termination on both ends 29 2.5mm2 m 6650 30 4mm2 m 980 ISOLATORS Supply and install the following isolators with cover plates and wall boxes 31 20A 2-pole No 10 32 30A 2-pole No 12 33 63A 3-pole No 4 WORK STATION Supply and install a workstation as indicated on the drawings complete with all accessories including, 34 2 Tier Wall Box (275mmx157mm), 2 Tier Cover, 2xNormal Socket Outlet, 1x Dedicated Socket Outlet, Telephone Point, Computer Point - Recessed in Wall No 2 35 2xNormal Socket Outlet, 1x Dedicated Socket Outlet, Telephone Point, Computer Point - Mounted on Power Skirting No 6 POWER SKIRTING Supply and install the following galvanise power skirting complete with cover plates and accessories. 2 compartment, 3 Tier Power Skirting m 26 77 Power skirting end caps No 8	28	6mm2	m	980		
Grade conductor into trunking and conduits including termination on both ends 25 2.5mm2		EARTHWIRE				
SOLATORS SUpply and install the following isolators with cover plates and wall boxes 20A 2-pole No 10 12 10 12 13 14 15 15 15 15 15 15 15		Grade conductor into trunking and conduits including				
Solation Supply and install the following isolators with cover plates and wall boxes 20A 2-pole No 10 10 32 30A 2-pole No 12 4	29	2.5mm2	m	6 650		
Supply and install the following isolators with cover plates and wall boxes 20 2 -pole No 10 32 30A 2 -pole No 12 33 63A 3 -pole No 4 WORK STATION Supply and Install a workstation as indicated on the drawings complete with all accessories including, 34 2 Tier Wall Box (275mmx157mm), 2 Tier Cover, 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point - Recessed in Wall No 2 35 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point, Computer Point - Mounted on Power Skirting POWER SKIRTING Supply and install the following galvanise power skirting complete with cover plates and accessories. 36 2 compartment, 3 Tier Power Skirting Power skirting end caps Carried to Collection R Carried to Collection	30	4mm2	m	980	i	
and wall boxes 20		ISOLATORS				
32 30A2-pole No 12 33 63A3-pole No 4 WORK STATION Supply and Install a workstation as indicated on the drawings complete with all accessories including, 34 2 Tier Wall Box (275mmx157mm), 2 Tier Cover, 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point - Recessed in Wall No 2 35 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point, Computer Point - Mounted on Power Skirting No 6 POWER SKIRTING Supply and install the following galvanise power skirting complete with cover plates and accessories. 36 2 compartment, 3 Tier Power Skirting m 26 37 Power skirting end caps No 8					i	
33 63A 3 – pole WORK STATION Supply and Install a workstation as indicated on the drawings complete with all accessories including, 34 2 Tier Wall Box (275mmx157mm), 2 Tier Cover, 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point – Recessed in Wall No 2 xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point, Computer Point – Mounted on Power Skirting No 6 POWER SKIRTING Supply and install the following galvanise power skirting complete with cover plates and accessories. 2 compartment, 3 Tier Power Skirting Power skirting end caps No 8 Carried to Collection R Section No. 4	31	20A 2-pole	No	10		
WORK STATION Supply and Install a workstation as indicated on the drawings complete with all accessories including, 34 2 Tier Wall Box (275mmx157mm), 2 Tier Cover, 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point – Recessed in Wall No 2 35 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point – Mounted on Power Skirting No 6 POWER SKIRTING Supply and install the following galvanise power skirting complete with cover plates and accessories. 36 2 compartment, 3 Tier Power Skirting m 26 37 Power skirting end caps No 8 Carried to Collection R	32	30A 2-pole	No	12		
Supply and Install a workstation as indicated on the drawings complete with all accessories including, 2 Tier Wall Box (275mmx157mm), 2 Tier Cover, 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point – Recessed in Wall No 2 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point – Mounted on Power Skirting No 6 POWER SKIRTING Supply and install the following galvanise power skirting complete with cover plates and accessories. 2 compartment, 3 Tier Power Skirting m 26 Power skirting end caps No 8 Carried to Collection R	33	63A 3-pole	No	4		
drawings complete with all accessories including, 2 Tier Wall Box (275mmx157mm), 2 Tier Cover, 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point – Recessed in Wall No 2 35 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point – Mounted on Power Skirting No 6 POWER SKIRTING Supply and install the following galvanise power skirting complete with cover plates and accessories. 36 2 compartment, 3 Tier Power Skirting m 26 37 Power skirting end caps No 8 Carried to Collection R		WORK STATION				
Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point – Recessed in Wall 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point – Mounted on Power Skirting No 6 POWER SKIRTING Supply and install the following galvanise power skirting complete with cover plates and accessories. 2 compartment, 3 Tier Power Skirting Power skirting end caps No 8 Carried to Collection R Section No. 4						
Telephone Point, Computer Point – Mounted on Power Skirting No 6 POWER SKIRTING Supply and install the following galvanise power skirting complete with cover plates and accessories. 2 compartment, 3 Tier Power Skirting m 26 Power skirting end caps No 8 Carried to Collection R Section No. 4	34	Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point,	No	2		
POWER SKIRTING Supply and install the following galvanise power skirting complete with cover plates and accessories. 2 compartment, 3 Tier Power Skirting m 26 Power skirting end caps No 8 Carried to Collection R Section No. 4	35	Telephone Point, Computer Point – Mounted on Power				
Supply and install the following galvanise power skirting complete with cover plates and accessories. 2 compartment, 3 Tier Power Skirting m 26 Power skirting end caps No 8 Carried to Collection R		Skirting	No	6		
complete with cover plates and accessories. 2 compartment, 3 Tier Power Skirting m 26 Power skirting end caps No 8 Carried to Collection R Section No. 4		POWER SKIRTING				
27 Power skirting end caps No 8 Carried to Collection R Section No. 4					:	
Carried to Collection R Section No. 4	36	2 compartment, 3 Tier Power Skirting	m	26		
Section No. 4	37	Power skirting end caps	No	8		
Section No. 4				!		
		Carried to Collection		1	R	
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1		Unit	Quantity	Rate	Amount
	CONDUIT				
	Supply and install conduit cast into concrete or screed, chased into concrete or brickwork and surface mounted for the electrical and telephone installation including couplings, bushes, locknuts, cutting, bending, accordance with the specification. fixing, draw boxes etc. in				
38	20mm dia PVC	m	1 150		
39	25mm dia PVC	m	800		
40	20mm dia Galvanised Steel	m	450		
41	25mm dia Galvanised Steel	m	450		
	ROUND DRAW BOXES				
	Supply and install the following round draw boxes build into brickwork, cast into concrete or dry wall.				
42	75mm dia PVC	No	287		
43	75mm dia Galvanised Metal	No	84		
	TRUNKING				
	Supply and installation of P9000 Trunking installed above ceiling for the distribution of small power wiring, complete with cover				
44	P9000 Trunking.	m	250		
45	P9000 Tees.	No	24		
46	P9000 90 degree bands.	No	24		
47	P9000 End caps.	No	40		
48	Solid Hanger	No	50		
49	Solid Crossover	No	12		
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1		Unit	Quantity	Rate	Amount
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	CECTION NO 4				
	SECTION NO. 4 ELECTRICAL INSTALLATION				
	BILL NO. 4 LEVEL 2				
	<u> LLVLL 2</u>				
	SECOND LEVEL - 1385.0m				
	DISTRIBUTION BOARDS		!		
	Supply and Install the following boards complete with equipment as indicated on the drawings.				
1	DB -NW	No	1		
2	DB - SW	No	1		
3	DB – CW	No	1		
4	DB - K	No	1		
	LIGHTING INSTALLATION Supply and installation of the following light fitting				
	Supply and installation of the following light fitting, complete with lamps and control gear				
5	Type A: 600mmx600mm 36W LED Panel Ceiling Recessed Luminaire fitted with Opal diffuser complete with driver	No	15		
6	Type A-E: 600mmx600mm 36W LED Panel Ceiling Recessed Luminaire fitted with Opal diffuser complete with driver (Emergency)	No	12		
7	Type E: Ceiling mounted watertight bulkhead fitted with 21W LED lamp – similar to BEKA Series 300	No	4		
8	Type E–E: Ceiling mounted watertight bulkhead fitted with 21W LED lamp – similar to BEKA Series 300 – Emergency	No	4		
9	Type G: 16W LED Ceiling Mounted Downlighter complete with driver – similar to RONDOmaxi	No	147		
10	Type G–E: 16W LED Ceiling Mounted Downlighter complete with driver – similar to RONDOmaxir (Emergency)	No	120		
11	Type G1: 7W LED Ceiling Mounted Downlighter complete with driver – similar to RONDOmidi	No	40		
12	Type G1–E: 7W LED Ceiling Mounted Downlighter complete with driver – similar to RONDOmidi (Emergency)	No	26		
	Carried to Collection			R	
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13	Type I1: 26W, 740mm Vandal – Resistant Linear LED Luminaire complete with driver – similar to BEKA ROUGHDGAURD	No	1.6			
14	Type I1–E: 26W, 740mm Vandal – Resistant Linear LED Luminaire complete with driver (Emergency) – similar to BEKA					
	ROUGHDGAURD	No				
15	Type LB 1: 26W LINEAR LED LIGHT – similar to BEKA LEDBeam	No	36		·	
16	Type W: 36W Decorative Bulkhead LED Light – similar to BEKA QVAL	No	2			
17	Type H: Wall mounted watertight Bulkhead with 21W LED Lamp with Aluminium Base and Opal Diffuser	No	46			
18	Type LD: 70W LED Disk Light Fitting with Aluminium Housing and Acrylic Diffuser Complete with Driver – similar to BEKA		20		:	
	LEDdisc maxi	No	38			
19	Type LD–E: 70W LED Disk Light Fitting with Aluminium Housing and Acrylic Diffuser Complete with Driver (emergency) – similar to BEKA LEDdisc maxi	\$ 1 ⁷ 2	24	:.		
		No	24			
20	Type LD1: 100W LED Disk Light Fitting with Aluminium Housing and Acrylic Diffuser Complete with Driver – similar to					
	BEKA LEDdisc maxi	No	14			
21	Type LD1–E: 100W LED Disk Light Fitting with Aluminium Housing and Acrylic Diffuser Complete with Driver (emergency) – similar to BEKA LEDdisc maxi	No	10		İ	
		No.	10			
22	Type Z: 21W LED Bollard Light – similar to BEKA Semita	NO	10			
23	Type BD: 16W LED DOWNLIGHTER (BLUE LIGHT) Light Fitting mounted on Soffit – similar to BEKARondo	Ņo	80			
24	Type GW: 16W LED DOWNLIGHTER (WARK WHITE) Light Fitting mounted on Soffit – similar to BEKARondo	No	80			
	<u>SENSORS</u>					
	Supply and install the following sensing equipment					
25	Occupancy Sensor	No	12			
26	Photo Cell	No	2			
	STRONG ROOMS/STORE ROOMS	* 25				
27	Supply and install indicator lights	No	1			
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ı			Unit	Quantity	Rate	Amount	
	LIGHT SWITCH	to the galaxy that					
	Supply and install the following with cover plate and wall boxes		:				
28	16A single lever		No	23			
29	16A two lever		No	4			
30	16A two way		No	4			
	SOCKET OUTLET	to a digital consultation					
	Supply and install the following with cover plate and wall boxes						
31	16A 3-pin single		Νo	4			
32	16A 3-pin double		No	18			
33	Switched Socket 16A, 3 PIN + 2x	EURO + 2xUSB Complete	No	32			
	PVC INSULATED WIRE						
	Supply and installation of the fo single core with colours into tru termination on both ends			. * * * .			
34	2.5mm2		m	3 750			
35	4mm2	and the second second	m	3 600			
36	6mm2		m	980			
	EARTHWIRE			-			
	Supply and install the following Grade conductor into trunking a termination on both ends	Bare Copper Earth 1000/600 and conduits including					
37	2.5mm2		m	7 350			
38			m	980			
	<u>ISOLATORS</u>	•					
	Supply and install the following	isolators with cover plates					
	and wall boxes		.;	4.4	į		
39	20A 2-pole		No	14			
40	30A 2-pole		No	20			
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		Carried to Collection			R		
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ı		Unit	Quantity	Rate	Amount	
	WORK STATION					
	Supply and Install a workstation as indicated on the drawings complete with all accessories including,					
41	2 Tier Wall Box (275mmx157mm), 2 Tier Cover, 2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point – Recessed in Wall	No	2			
	•	No	2			
42	2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point – Mounted on Power Skirting	No	16			
	POWER SKIRTING					
	Supply and install the following galvanise power skirting complete with cover plates and accessories.					
43	2 compartment, 3 Tier Power Skirting	m	100			
44	Power skirting end caps	No	8			
İ	CONDUIT					
	Supply and install conduit cast into concrete or screed, chased into concrete or brickwork and surface mounted for the electrical and telephone installation including couplings, bushes, locknuts, cutting, bending, accordance with the specification. fixing, draw boxes etc. in					·
45	20mm dia PVC	m	1 250			
46	25mm dia PVC	m	900			
47	20mm dia Galvanised Steel	m	550			
48	25mm dia Galvanised Steel	m	550	1		
	ROUND DRAW BOXES					
	Supply and install the following round draw boxes build into brickwork, cast into concrete or dry wall.					
49	75mm dia PVC	No	732			
50	75mm dia Galvanised Metal	No	404			
	TRUNKING					
	Supply and installation of P9000 Trunking installed above ceiling for the distribution of small power wiring, complete with cover		•			
51	P9000 Trunking.	m	450			
	Carried to Collection			R		\perp
	Section No. 4					
	Bill No. 4 Level 2					
	204					

1		Unit	Quantity	Rate	Amount	
İ						
52	P9000 Tees.	No	24			
53	P9000 90 degree bands.	No	24			
54	P9000 End caps.	No	40			
55	Solid Hanger	No	90			
56	Solid Crossover	No	12			
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ı		Unit	Quantity	Rate	Amount
	CECTION NO. 4				
	SECTION NO. 4 ELECTRICAL INSTALLATION				
	BILL NO. 5				
	LEVEL 3				
	THIRD LEVEL - 1388.5m			!	
	<u>DISTRIBUTION BOARDS</u>				
	Supply and Install the following boards complete with equipment as indicated on the drawings.				
1	DB-SL1	No	1		
2	DB -SL2	No	1		
	LIGHTING INSTALLATION				
	Supply and installation of the following light fitting,				
,	complete with lamps and control gear Type B: 1200mmx600mm 65W LED Panel Ceiling Recessed				
3	Luminaire fitted with Opal diffuser complete with driver	No	8		
4	Type B-E: 1200mmx600mm 65W LED Panel Ceiling Recessed				
	Luminaire fitted with Opal diffuser complete with driver (Emergency)	No	5		
		110			
5	Type E: Ceiling mounted watertight bulkhead fitted with 21W LED lamp – similar to BEKA Series 300	No	.4		
		110	•		
6	Type E-E: Ceiling mounted watertight bulkhead fitted with 21W LED lamp - similar to BEKA Series 300 - Emergency	No	4		
		110	•		
7	Type G: 16W LED Ceiling Mounted Downlighter complete with driver – similar to RONDOmaxi	No	78		
		110	70		
8	Type G-E: 16W LED Ceiling Mounted Downlighter complete with driver - similar to RONDOmaxir (Emergency)	No	70		
			, 0		
9	Type I1: 26W, 740mm Vandal - Resistant Linear LED Luminaire complete with driver - similar to BEKA ROUGHDGAURD	No	. 6		
	·	110			
10	Type I1–E: 26W, 740mm Vandal - Resistant Linear LED Luminaire complete with driver (Emergency) – similar to BEKA				
	ROUGHDGAURD	No	6		
11	Type LB 1: 26W LINEAR LED LIGHT – similar to BEKA LEDBeam	No	24		
	Carried to Collection	•		R	
	Section No. 4				
	Bill No. 5 Level 3	• • •			
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!		Unit	Quantity	Rate	Amount]
4.0	T 111 2CM D constitut Dullibrard LED Light discillants DEVA	1.2				
12	Type W: 36W Decorative Bulkhead LED Light – similar to BEKA QVAL	No	2			
			_			
13	Type HB: 100W LED HIGHBAY Light Fitting – similar to BEKA ECOBay	No.	4			
		No	. *			
14	Type HB-E: 100W LED HIGHBAY Light Fitting (emergency) - similar to BEKA ECOBay					
	Similar to ben't ecobay	No	2			
15	, , , , , , , , , , , , , , , , , , ,					
	mounted on Soffit – similar to BEKARondo	No	10			
16	· · · · · · · · · · · · · · · · · · ·					
	Fitting mounted on Soffit – similar to BEKARondo	No	8			
	<u>SENSORS</u>					
	Supply and install the following sensing equipment					
17	Occupancy Sensor	No	4			
	STRONG ROOMS/STORE ROOMS					
10		No	1			
18	Supply and install indicator lights	140				
	<u>LIGHT SWITCH</u>					
	Supply and install the following light switches complete with cover plate and wall boxes	. 7				
19	16A single lever	Νo	14			
20	16A two lever	No	3			
21	16A two way	No	4			
	SOCKET OUTLET	1.57				
	Supply and install the following socket outlets complete with cover plate and wall boxes		1 .			
22	16A 3-pin double	No	6			
23	Switched Socket 16A, 3 PIN + 2xEURO + 2xUSB Complete	No	6			
	PVC INSULATED WIRE					
	Supply and installation of the following 1000/600 grade PVC					
	single core with colours into trunking and conduits including termination on both ends	+ +5	-			
24	2.5mm2	m	1 380			
		* .				
25	4mm2	m	1 440			
	Carried to Collection			R		
	Section No. 4					
	Bill No. 5					
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1		Unit	Quantity	Rate	Amount
	A contract of the second of th	9+	1.5		
26	6mm2	m	980		
	EARTHWIRE				i i
	Supply and install the following Bare Copper Earth 1000/600				
	Grade conductor into trunking and conduits including termination on both ends		~ ***		
27	2.5mm2	m	2 820		
28	4mm2	m	980		
20	ISOLATORS				
	Supply and install the following isolators with cover plates	* .*			
	and wall boxes				
29	20A 2-pole	No	2		
30	30A 2-pole	No	6		
	WORK STATION				
	Supply and Install a workstation as indicated on the drawings complete with all accessories including	·			
31	2xNormal Socket Outlet, 1 x Dedicated Socket Outlet,				
	Telephone Point, Computer Point – Mounted on Power Skirting	No	10		
	POWER SKIRTING				
	Supply and install the following galvanise power skirting				
	complete with cover plates and accessories.		50		
32	2 compartment, 3 Tier Power Skirting	m	50		
33	Power skirting end caps	No	6		
	CONDUIT				
	Supply and install conduit cast into concrete or screed, chased into concrete or brickwork and surface mounted for				
i	the electrical and telephone installation including couplings, bushes, locknuts, cutting, bending, accordance				
	with the specification. fixing, draw boxes etc. in	٠.	:		
34	20mm dia PVC	·m	460		
35	25mm dia PVC	m	360		
36	20mm dia Galvanised Steel	m	350		
37	25mm dia Galvanised Steel	m	350		
	Carried to Collection	• •		R	
	Section No. 4				
	Bill No. 5 Level 3				
	209				

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		Unit	Quantity	Rate	Amount	
	ROUND DRAW BOXES			•		
	Supply and install the following round draw boxes build into brickwork, cast into concrete or dry wall.					
38	75mm dia PVC	No	231			
39	75mm dia Galvanised Metal	No	28			
	TRUNKING					
	Supply and installation of P9000 Trunking installed above ceiling for the distribution of small power wiring, complete with cover					
40	P9000 Trunking.	m	75			
41	P9000 Tees.	No	2			
42	P9000 90 degree bands.	No	2			
43	P9000 End caps.	No	2			
44	Solid Hanger	No	15			
45	Solid Crossover	No	1			
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	Carried to Collection			R		
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BILL NO. 5				
LEVEL 3				
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Section No. 4				
Bill No. 5				
Level 3	211			

		Unit	Quantity	Rate	ll Amount
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	SECTION NO. 4				
	ELECTRICAL INSTALLATION				
	BILL NO. 6				
	LEVEL 4				
	FOURTH LEVEL - 1392.0m				
	DISTRIBUTION BOARDS				
	Supply and Install the following boards complete with				
	equipment as indicated on the drawings.				
1	DB -4L1	No	1		1
2	DB -4L2	No	1		
	LIGHTING INSTALLATION				
	Supply and installation of the following light fitting,				
	complete with lamps and control gear				
3	Type E: Ceiling mounted watertight bulkhead fitted with 21W				
	LED lamp - similar to BEKA Series 300	No	4		
4	Type E-E: Ceiling mounted watertight bulkhead fitted with				
	21W LED lamp – similar to BEKA Series 300 – Emergency	No	4		
5	Type G: 16W LED Ceiling Mounted Downlighter complete with driver – similar to RONDOmaxi				
	With driver – Similar to KONDOMAXI	No	10		
6	Type G-E: 16W LED Ceiling Mounted Downlighter complete with driver – similar to RONDOmaxir (Emergency)		10		
	with driver – Similar to Nowbolliaxii (Emergency)	No	10		
7	Type I1: 26W, 740mm Vandal – Resistant Linear LED Luminaire complete with driver – similar to BEKA ROUGHDGAURD	21-	-		
		No	6		
8	Type I1–E: 26W, 740mm Vandal – Resistant Linear LED Luminaire complete with driver (Emergency) – similar to BEKA				
	ROUGHDGAURD	No	6		
9	Type HB: 100W LED HIGHBAY Light Fitting – similar to BEKA				
	ECOBay	No	2		
10	Type HB-E: 100W LED HIGHBAY Light Fitting (emergency) -				
	similar to BEKA ECOBay	No	2		
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	Section No. 4				
	Bill No. 6				
	Level 4				
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ı		Unit	Quantity	Rate	Amount
	<u>SENSORS</u>				
	Supply and install the following sensing equipment				
11	Occupancy Sensor	No	8		
	STRONG ROOMS/STORE ROOMS				
12	Supply and install indicator lights	No	1		
	LIGHT SWITCH				
	Supply and install the following light switches complete with cover plate and wall boxes				
13	16A single lever	No	8		
14	16A two lever	No	3		
15	16A two way	No	4		
	SOCKET OUTLET				
	Supply and install the following socket outlets complete with cover plate and wall boxes				
16	16A 3-pin double	No	2		
17	Switched Socket 16A, 3 PIN + 2xEURO + 2xUSB Complete	No	10		ļ
	PVC INSULATED WIRE				
	Supply and installation of the following 1000/600 grade PVC single core with colours into trunking and conduits including termination on both ends				
18	2.5mm2	m	1 380		
19	4mm2	m	1 280		
20	6mm2	m	980		
	<u>EARTHWIRE</u>				
	Supply and install the following Bare Copper Earth 1000/600 Grade conductor into trunking and conduits including termination on both ends				
21	2.5mm2	m	2 660		
22	4mm2	m	980		
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	grade in Arthur Arthur and Arthur	Unit	Quantity	Rate	Amount
	<u>ISOLATORS</u>	٠	- "		
	Supply and install the following isolators with cover plates and wall boxes			į	
23	20A 2-pole	No	8	!	
	CONDUIT	Ì			
***************************************	Supply and install conduit cast into concrete or screed, chased into concrete or brickwork and surface mounted for the electrical and telephone installation including couplings, bushes, locknuts, cutting, bending, accordance with the specification. fixing, draw boxes etc. in			·	
24	20mm dia PVC	m	460		
25	25mm dia PVC	m	320		
26	20mm dia Galvanised Steel	m	300		
27	25mm dia Galvanised Steel	m	300		
	ROUND DRAW BOXES	1.	NI A	\$. 	
	Supply and install the following round draw boxes build into brickwork, cast into concrete or dry wall.	'-			
28	75mm dia PVC	No	44		
29	75mm dia Galvanised Metal	No	8		
	TRUNKING	.,	2		
	Supply and installation of P9000 Trunking installed above ceiling for the distribution of small power wiring, complete with cover				
30	P9000 Trunking.	m	34		
31	P9000 Tees.	No	4		
32	P9000 90 degree bands.	No	2		:
33	P9000 End caps.	No	6		
34	Solid Hanger	Νο	7		
35	Solid Crossover	No	4		
		7			
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		Unit	Quantity	Rate	Amount
	<u>SENSORS</u>				
	Supply and install the following sensing equipment				
11	Occupancy Sensor	No	8		
	STRONG ROOMS/STORE ROOMS				
12	Supply and install indicator lights	No	1		
	LIGHT SWITCH				
	Supply and install the following light switches complete with cover plate and wall boxes				
13	16A two lever	No	4		
14	16A two way	No	4		
	SOCKET OUTLET				
	Supply and install the following socket outlets complete with cover plate and wall boxes				
15	16A 3-pin double	No	6		
16	Switched Socket 16A, 3 PIN + 2xEURO + 2xUSB Complete	No	2		
	PVC INSULATED WIRE				
	Supply and installation of the following 1000/600 grade PVC single core with colours into trunking and conduits including termination on both ends				
17	2.5mm2	m	1 260		
18	4mm2	m	9 200		
19	6mm2	m	980		
	EARTHWIRE	-			
	Supply and install the following Bare Copper Earth 1000/600 Grade conductor into trunking and conduits including termination on both ends				
20	2.5mm2	m	10 460		
21	4mm2	m	980		
	ISOLATORS				
	Supply and install the following isolators with cover plates and wall boxes				
22	20A 2-pole	No	8		
	Carried to Collection			R	
	Section No. 4 Bill No. 7				
	Level 5				
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		Unit	Quantity	Rate	Amount	
	CONDUIT					
	Supply and install conduit cast into concrete or screed, chased into concrete or brickwork and surface mounted for the electrical and telephone installation including couplings, bushes, locknuts, cutting, bending, accordance with the specification. fixing, draw boxes etc. in					
23	20mm dia PVC	m	420			
24	25mm dia PVC	m	2 300			
25	20mm dia Galvanised Steel	· m	300			
26	25mm dia Galvanised Steel	m	300			
	ROUND DRAW BOXES	;				
	Supply and install the following round draw boxes build into brickwork, cast into concrete or dry wall.					
27	75mm dia PVC	No	194			
28	75mm dia Galvanised Metal	No	8			
	TRUNKING					
	Supply and installation of P9000 Trunking installed above ceiling for the distribution of small power wiring, complete with cover					
29	P9000 Trunking.	m	200		:	
30	P9000 Tees.	No	6			
31	P9000 90 degree bands.	Nó	6		:	
32	P9000 End caps.	No	8			
33	Solid Hanger	No	40			
34	Solid Crossover	No	4			
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	Bill No. 7					
	Level 5					
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BILL NO. 7 LEVEL 5 COLLECTION Brought Forward from Page	Page No 205 206 207		
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		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	ELECTRICAL INSTALLATION				
	BILL NO. 8				
	GUARD HOUSE				
	GUARD HOUSE				
	DISTRIBUTION BOARDS				
	Supply and Install the following boards complete with equipment as indicated on the drawings.				
1	DB -7L1	No	1		
	LIGHTING INSTALLATION				
	Supply and installation of the following light fitting, complete with lamps and control gear				
2	Type A: 600mmx600mm 36W LED Panel Ceiling Recessed				
	Luminaire fitted with Opal diffuser complete with driver	No	4		
3	Type A–E: 600mmx600mm 36W LED Panel Ceiling Recessed Luminaire fitted with Opal diffuser complete with driver				
ì	(Emergency)	No	2		
4	Type E: Ceiling mounted watertight bulkhead fitted with 21W LED lamp – similar to BEKA Series 300	No.	1		
5	Type E-E: Ceiling mounted watertight bulkhead fitted with 21W LED lamp – similar to BEKA Series 300 – Emergency	No	1		
6	Type H: Wall mounted watertight Bulkhead with 21W LED Lamp with Aluminium Base and Opal Diffuser	No	4		
7	Type GH: 100W LED Light Fitting with Aluminium Housing and Acrylic Diffuser Complete with Driver – similar to BEKA				
	LEDTEC	No	33		
8	Type GH–E: 100W LED Light Fitting with Aluminium Housing and Acrylic Diffuser Complete with Driver (emergency) –				
	similar to BEKA LEDTEC Residence of the second seco	No	33		
	STRONG ROOMS/STORE ROOMS				
9	Supply and install indicator lights	No	1		
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	Section No. 4 Bill No. 8				
	Guard House	11.	:		
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I		Unit	Quantity	Rate	Amount
	<u>LIGHT SWITCH</u>	O.	:		
	Supply and install the following light switches complete with cover plate and wall boxes				
10	16A single lever	No	6		
	SOCKET OUTLET		:		
	Supply and install the following socket outlets complete with cover plate and wall boxes				
11	16A 3-pin double	No	4	· :	
12	Switched Socket 16A, 3 PIN + 2xEURO + 2xUSB Complete	No	2		i
	PVC INSULATED WIRE				
	Supply and installation of the following 1000/600 grade PVC single core with colours into trunking and conduits including termination on both ends				
13	2.5mm2	m	900		
14	4mm2	m	800		
15	6mm2	m	980		
	<u>EARTHWIRE</u>				
	Supply and install the following Bare Copper Earth 1000/600 Grade conductor into trunking and conduits including termination on both ends				
16	2.5mm2	m	1 700		
17	4mm2	m	980		
	<u>ISOLATORS</u>				
	Supply and install the following isolators with cover plates and wall boxes				
18	20A 2-pole	No	8		
	WORK STATION				
	Supply and Install a workstation as indicated on the drawings complete with all accessories including,				
19	2xNormal Socket Outlet, 1 x Dedicated Socket Outlet, Telephone Point, Computer Point – Mounted on Power				
	Skirting	No	. 2		
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	Carried to Collection			R	
	Section No. 4				
	Bill No. 8				
	Guard House 210	Ť			
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		Unit	Quantity	Rate	Amount	
	POWER SKIRTING					
	Supply and install the following galvanise power skirting complete with cover plates and accessories.					
20	2 compartment, 3 Tier Power Skirting	m	14			
21	Power skirting end caps	No	8			
	CONDUIT					
	Supply and install conduit cast into concrete or screed, chased into concrete or brickwork and surface mounted for the electrical and telephone installation including couplings, bushes, locknuts, cutting, bending, accordance with the specification. fixing, draw boxes etc. in					
22	20mm dia PVC	m	300			
23	25mm dia PVC	m	200			
24	20mm dia Galvanised Steel	m	75			
25	25mm dia Galvanised Steel	m	75			
	ROUND DRAW BOXES			!		
	Supply and install the following round draw boxes build into brickwork, cast into concrete or dry wall.					
26	75mm dia PVC	No	78			
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	Bill No. 8					
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BILL NO. 8				
GUARD HOUSE				
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Section No. 4				
Bill No. 8				
Guard House	212			

		Unit	Quantity	Rate	Amount
	SECTION NO. 4				
	ELECTRICAL INSTALLATION				
	BILL NO. 9				
	ELECTRICAL PROVISIONAL SUMS				
	Provisional Amounts				
1	Stage Lighting – including control for both theatres, dimming for heritage incandescent fixtures, LED generic profile, fresnel and cyclorama fixtures, moving head spot and wash fixtures, follow spots, hanging hardware and stands, and LED auditorium lighting system with optional local or control from the lighting desk.	Prov Sum			
2	Sound Installation – including PA for both the Main and Studio Theatres, in–ear and external monitors, radio and conventional microphones, mixing desks, processing units, amplifiers, run–of–play and paging to dressing rooms and offices, technical headset communication system, PA for the Poetry Rooms and Dance Studio with both local and central playback, and foyer PA for audience announcements.	Prov Sum			
3	Audio Visual – including remote PTF cameras in both theatres, camera control and vision mixing desks, preview monitors, streaming to online and other venues in the building, and smart boards in the Poetry Rooms	Prov Sum			
4	Stage Mechanics – including flybars, spotbars, under flyfloor hoists, and traverse curtain track.	Prov Sum			
5	ICT- Allow for installation of ICT including Wi-Fi or Fibre,				
	Telephone, Sever	Prov			
		Sum			
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	Section No. 4			IX.	
	Bill No. 9				
	Electrical Provisional Sums				
	213				

	Onit	Quantity	Rate	Amount	
SECTION NO. 4					
ELECTRICAL INSTALLATION					
BILL NO. 10					
ELECTRONICS					
PREAMBLES					
GENERAL NOTES					
This Bill of Quantities forms part of, and must be read in conjunction with the specifications					
The quantities given in the Bill for cables, cable markers, earth wire laid with cables, overhead conductors, overhead earth wires and					
excavations cannot be regarded as exact and are subject to measurement on site after completion of the service and adjustments will be made according to the unit rates given in the bill.					
In the event of discrepancies between the drawings, specifications and Bill of Quantities, the Engineer shall decide whether the work as					
executed shall be remeasured on site or whether remeasurement shall be effected from the working drawings only.					
NOTE:					
Checking of Cable Lengths					
Notwithstanding the fact that the lengths of cables as given in the Bill of Quantities have been measured from scaled drawings, the contractor					
shall check such lengths on site before ordering the cable as he / she will not be paid for excess cable after the completion of the service					
Any allowance for off-cuts shall be made in the unit rates. The final measurements shall be based on the nett route length of the cables and overhead lines concerned.					
Checking of quantities for other materials					
Notwithstanding the fact that the quantities for light fittings, switches, socket outlets and isolators as given in the Bill of Quantities have been			 		
measured from site inspections, the contractor shall check such lengths/quantities on site before ordering as he / she will not be paid for					
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Bill No. 10					
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excess quantities after the co ambiguous or dubious wording with the responsible	ompletion of the service. Any ng or quantities must be cleared				
specification and / or drawing	r additional costs, is solely the				
Where alternative prices for applicable) of different manu alternative price for switchge	facture are quoted the lowest				
	be quoted against the relevant The remaining alternative prices				
The unit prices quoted in the all installation materials as ar installation in accordance wit					
	shall comply with the relevant SABS, SANS and as stated in this		1 8 12	e the project of the second	
the Bill of Quantities. Should	oe recognised but the original				
	ompleted Bill of Quantities and ny individual price and to rectify fal tender price as quoted				
Electrical materials associated conduit accessories and wirin measurable and the	d with the building, for example g accessories, will not be re-				
	w for the supply of all necessary ne successful execution and				
The unit rate for each item in include for all materials, labor everything necessary for the	ur, profit, transport, etc.,				
execution and complete insta accordance with the descripti					
The Bills of Quantities shall no purposes. The contractor shall overhead conductors,		9			
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		Unit	Quantity	Rate	Amount	
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	materials, light fitting quantities, switches, socket outlets and isolators on site before ordering any of these					
	Any allowance for off–cuts of cables shall be made in the unit rates.					
	The rates shall exclude Value-Added Tax (VAT) and the total carried over to the final summary.					
	The contractor is required to label all distribution boards, supply and install all danger warning signs, label all switches, socket outlets and					
	isolators etc. and all costs shall be deemed to have been provided for and included in the unit rates and sum amounts tendered for the items scheduled in the Bill of Quantities and separate additional payment will not be made.					:
	Black ink shall be used for pricing the document, any other prices marked in other colours or pencil shall not be considered for the total price of the bill.					
	Contractor's Name:					
	Electrical Contractor's Registration Number at the Electrical Contracting Board of South Africa:					
	Name of Registered Person / Firm at ECB:					
	NB: Only contractors whose ECB Registration is for Three Phase installations will be considered.					
	CONTRACTOR TO SUBMIT ACCREDITATION PAPERS OF THE ELECTRICAL CONTRACTOR WITHIN FOURTEEN DAYS OF BEING APPOINTED					
	ACCESS CONTROL AND CCTV LEVEL 1 and Subbasement					
1	Portal Cluster Controller, Wiegand Module, IPS Box- c/w 1 x Wiegand reader module, supports 2 Wiegand readers 220VAC	No	2	į		
2	SR 12 Volt 7AH- sealed lead acid battery- maintenance-free	No	2			
3	MA Lite (Multi) WR with Mifare card reader for 500 users standard, extendable to 10 000 users	No	6			
4	Electro Magnetic Lock – 12VDC or 24VDC input voltage, 272kg holding force	No	2			•
5	Z-Bracket- inswing doors	No	2			
6	Silver Door Closer – medium duty, 4080kg, EN24	No	2			
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	Section No. 4					
	Bill No. 10	ļ				
	Electronics					
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		Unit	Quantity	Rate	Amount	/ _
7	Call Point – double contact resettable green, with lid	No	2			
8	Dahua IP 4MP Dome – 2.8mm lens, 30m IR, IVS, DWDR, IP67, SD card support, 12VDC & PoE	No	7			
9	12U Wallbox, Swing Frame, 600mm Deep, Black	No	1			
10	Acconet 48 Port RJ45 Patch Panel, 2U, Black	No	1			
11	Acconet 24 Port RJ45 Patch Panel, 1U, Black	No	1			
12	Acconet Brush Panel 1U 19", Back	No	1			
13	Acconet Fan Unit, 4 Fans, 1U, Black, Power Switch, C14 Power Connector, Power cable not incl.	No	2			
14	24*30W PoE, 2*SFP Layer 2 Smart PoE Switch Built–in Device Management System (DMS) Software Total power budget: 370W 6KV PoE surge protection	No	1			
15	1.25G Ethernet Tranceiver, Multi-mode, SFP Type, 1310nm, FP-LD-2Km, Duplex LC, DC 3.3V	No	2			
16	M- SERIES 3KVA ON-LINE RACK/TOWER UPS.	No	1			
17	RAIL KIT FOR RACK MOUNT UPS	No	1			
18	Acconet CAT6 UTP Flylead, 1 Meter, Straight, Stranded Cable, Moulded Boots and Plugs, Blue	No	7			
19	Acconet CAT6 UTP Flylead, 1 Meter, Straight, Stranded Cable, Moulded Boots and Plugs, Green	No	12			
20	LEAD MM RUGG DUPLEX LC – LC 150m	No	1			
	ACCESS CONTROL AND CCTV LEVEL 2					
21	Portal Cluster Controller, Wiegand Module, IPS Box– c/w 1 x Wiegand reader module, supports 2 Wiegand readers 220VAC	No	8			
22	SR 12 Volt 7AH- sealed lead acid battery- maintenance-free	No	8			
23	MA Lite (Multi) WR with Mifare card reader for 500 users standard, extendable to 10 000 users	No	16			
24	Electro Magnetic Lock – 12VDC or 24VDC input voltage, 272kg holding force	No	1			
25	Z-Bracket- inswing doors	No	8			
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	Section No. 4					
	Bill No. 10	1				
	Electronics					
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ı		Unit	Quantity	Rate	Amount
26	Silver Door Closer - medium duty, 4080kg, EN24	No	8		
27	Call Point – double contact resettable green, with lid	No	8		
28	Dahua IP 4MP Dome – 2.8mm lens, 30m IR, IVS, DWDR, IP67, SD card support, 12VDC & PoE	No	14		
29	9U Wallbox, Swing Frame, 600mm Deep, Black	No	2		
30	Acconet 24 Port RJ45 Patch Panel, 1U, Black	No	2		
31	Acconet Brush Panel 1U 19", Back	No	2		
32	Acconet Fan Unit, 4 Fans, 1U, Black, Power Switch, C14 Power Connector, Power cable not incl.	No	2		
33	24*30W PoE, 2*SFP Layer 2 Smart PoE Switch Built-in Device Management System (DMS) Software Total power budget: 370W 6KV PoE surge protection	No	1		
34	1.25G Ethernet Tranceiver, Multi-mode, SFP Type, 1310nm, FP-LD-2Km, Duplex LC, DC 3.3V	No	2		
35	M SERIES 2KVA ON-LINE RACK/TOWER UPS.	No	1		
36	RAIL KIT FOR RACK MOUNT UPS	No	1		
37	Acconet CAT6 UTP Flylead, 1 Meter, Straight, Stranded Cable, Moulded Boots and Plugs, Blue	No	7		
38	Acconet CAT6 UTP Flylead, 1 Meter, Straight, Stranded Cable, Moulded Boots and Plugs, Green	No	12		
39	LEAD MM RUGG DUPLEX LC - LC 150m	No	1		
	ACCESS CONTROL AND CCTV LEVEL 3				
40	Portal Cluster Controller, Wiegand Module, IPS Box- c/w 1 x Wiegand reader module, supports 2 Wiegand readers 220VAC	No	2		
41	SR 12 Volt 7AH- sealed lead acid battery- maintenance-free	No	2		
42	MA Lite (Multi) WR with Mifare card reader for 500 users standard, extendable to 10 000 users	No	6		
43	Electro Magnetic Lock – 12VDC or 24VDC input voltage, 272kg holding force	No	2		
44	Z-Bracket- inswing doors	No	2		
	Carried to Collection			R	
	Section No. 4				
	Bill No. 10				
	Electronics				
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		Unit	Quantity	Rate	Amount	
45	Silver Door Closer – medium duty, 4080kg, EN24	No	2			
46	Call Point – double contact resettable green, with lid	No	2			
47	Dahua IP 4MP Dome – 2.8mm lens, 30m IR, IVS, DWDR, IP67, SD card support, 12VDC & PoE	No	7			
48	9U Wallbox, Swing Frame, 600mm Deep, Black	No	1			
49	Acconet 24 Port RJ45 Patch Panel, 1U, Black	No	1			
50	Acconet Brush Panel 1U 19", Back	No	1			
51	Acconet Fan Unit, 4 Fans, 1U, Black, Power Switch, C14 Power Connector, Power cable not incl.	No	1			
52	24*30W PoE, 2*SFP Layer 2 Smart PoE Switch Built-in Device Management System (DMS) Software Total power budget: 370W 6KV PoE surge protection	No	1			
53	1.25G Ethernet Tranceiver, Multi-mode, SFP Type, 1310nm, FP-LD-2Km, Duplex LC, DC 3.3V	Ño	2			
54	M- SERIES 2KVA ON-LINE RACK/TOWER UPS.	No	1			
55	RAIL KIT FOR RACK MOUNT UPS	No	1			
56	Acconet CAT6 UTP Flylead, 1 Meter, Straight, Stranded Cable, Moulded Boots and Plugs, Blue	No	7			
57	Acconet CAT6 UTP Flylead, 1 Meter, Straight, Stranded Cable, Moulded Boots and Plugs, Green	No	12			
58	LEAD MM RUGG DUPLEX LC – LC 150m	No	1			
	ACCESS CONTROL AND CCTV LEVEL 4					
59	Portal Cluster Controller, Wiegand Module, IPS Box-c/w 1 x Wiegand reader module, supports 2 Wiegand readers 220VAC	No	4			
60	SR 12 Volt 7AH- sealed lead acid battery- maintenance-free	No	4			
61	MA Lite (Multi) WR with Mifare card reader for 500 users standard, extendable to 10 000 users	No	8			
62	Electro Magnetic Lock – 12VDC or 24VDC input voltage, 272kg holding force	No	4			
63	Z-Bracket- inswing doors	No	4			
	Carried to Collection			R		
	Section No. 4 Bill No. 10 Electronics					
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ı		Unit	Quantity	Rate	Amount
64	Silver Door Closer – medium duty, 4080kg, EN24	No	4		
65	Call Point – double contact resettable green, with lid	No	4		
66	Dahua IP 4MP Dome – 2.8mm lens, 30m IR, IVS, DWDR, IP67, SD card support, 12VDC & PoE	No	12		
67	9U Wallbox, Swing Frame, 600mm Deep, Black	No	1		
68	Acconet 24 Port RJ45 Patch Panel, 1U, Black	No	1		
69	Acconet Brush Panel 1U 19", Back	No	1		
70	Acconet Fan Unit, 4 Fans, 1U, Black, Power Switch, C14 Power Connector, Power cable not incl.	No	1		
71	24*30W PoE, 2*SFP Layer 2 Smart PoE Switch Built-in Device Management System (DMS) Software Total power budget: 370W 6KV PoE surge protection	No	1		
72	1.25G Ethernet Tranceiver, Multi-mode, SFP Type, 1310nm, FP-LD-2Km, Duplex LC, DC 3.3V	No	2		
73	M- SERIES 2KVA ON-LINE RACK/TOWER UPS.	No	1		
74	RAIL KIT FOR RACK MOUNT UPS	No	1		
75	Acconet CAT6 UTP Flylead, 1 Meter, Straight, Stranded Cable, Moulded Boots and Plugs, Blue	No	7		
76	Acconet CAT6 UTP Flylead, 1 Meter, Straight, Stranded Cable, Moulded Boots and Plugs, Green	No	12		
77	LEAD MM RUGG DUPLEX LC - LC 150m	Ν̈́ο	1		
	ACCESS CONTROL AND CCTV LEVEL 5	,ª			
78	Portal Cluster Controller, Wiegand Module, IPS Box-c/w 1 x Wiegand reader module, supports 2 Wiegand readers 220VAC	No	4		
79	SR 12 Volt 7AH- sealed lead acid battery- maintenance-free	No.	4		
80	MA Lite (Multi) WR with Mifare card reader for 500 users				
	standard, extendable to 10 000 users	No	6		
81	Electro Magnetic Lock – 12VDC or 24VDC input voltage, 272kg holding force	No	4		
82	Z-Bracket- inswing doors	No	4		
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	Section No. 4 Bill No. 10		i		
	Electronics				
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		Unit	Quantity	Rate	Amount
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83	Silver Door Closer – medium duty, 4080kg, EN24	No	4		
		11	4		
84	Call Point - double contact resettable green, with lid	No	4		
85	Dahua IP 4MP Dome – 2.8mm lens, 30m IR, IVS, DWDR, IP67, SD card support, 12VDC & PoE	No	2		
86	9U Wallbox, Swing Frame, 600mm Deep, Black	No	1		
87	Acconet 24 Port RJ45 Patch Panel, 1U, Black	No	2		!
88	Acconet Brush Panel 1U 19", Back	No	2		
89	Acconet Fan Unit, 4 Fans, 1U, Black, Power Switch, C14 Power Connector, Power cable not incl.	No	1		
90	24*30W PoE, 2*SFP Layer 2 Smart PoE Switch Built-in Device Management System (DMS) Software Total power budget: 370W 6KV PoE surge protection	No	1	i	
91	8*30W PoE, 2*SFP Layer 2 Smart PoE Switch Built–in Device Management System (DMS) Software Total power budget: 130W 6KV PoE surge protection	No	. 1		
92	1.25G Ethernet Tranceiver, Multi-mode, SFP Type, 1310nm, FP-LD-2Km, Duplex LC, DC 3.3V	No	4		
93	M- SERIES 2KVA ON-LINE RACK/TOWER UPS.	Ņα	1		
94	RAIL KIT FOR RACK MOUNT UPS	No	1		
95	Acconet CAT6 UTP Flylead, 1 Meter, Straight, Stranded Cable, Moulded Boots and Plugs, Blue	No	4		
96	Acconet CAT6 UTP Flylead, 1 Meter, Straight, Stranded Cable, Moulded Boots and Plugs, Green	Р да No	.: 24		
97	LEAD MM RUGG DUPLEX LC – LC 150m	No	1		
	ACCESS CONTROL AND CCTV GUARD HOUSE				
98	Portal Cluster Controller, Wiegand Module, IPS Box-c/w 1 x Wiegand reader module, supports 2 Wiegand readers 220VAC	No	2		
99	SR 12 Volt 7AH- sealed lead acid battery, maintenance free	No	2		
1003	MA Lite (Multi) WR with Mifare card reader for 500 users standard, extendable to 10 000 users	No	. 4		
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	and the second of the second o	Unit	Quantity	Rate
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101	Electro Magnetic Lock – 12VDC or 24VDC input voltage,	2 _{4.5}	. :	
101	272kg holding force	No.	2	
1021	The state of the s	i-g No	√ : 2	
1021	Z-Bracket- inswing doors	No -	_	
2		*V2-1	. i 	
1031	Silver Door Closer – medium duty, 4080kg, EN24	No	22	:
0		:		
3	The state of the s		: -	
	Call Point – double contact resettable green, with lid	No	2	
0 4				
105	Dahua IP 4MP Dome - 2.8mm lens, 30m IR, IVS, DWDR, IP67,			
100	SD card support, 12VDC & PoE	No	2	
106	9U Wallbox, Swing Frame, 600mm Deep, Black	No	2	
107	Acconet 24 Port RJ45 Patch Panel, 1U, Black	No	1	$X_{ij} = \{x_i, \dots, x_k\}$
	Acconet Brush Panel 1U 19", Back	No	1	•
0 8				
109	Acconet Fan Unit, 4 Fans, 1U, Black, Power Switch, C14 Power	\$ -		
109	Connector, Power cable not incl.	No	1	
110	16*30W PoE, 2*SFP Layer 2 Smart PoE Switch Built-in Device	18 -		
110	Management System (DMS) Software Total power budget:			
	250W 6KV PoE surge protection	No	1	
1 11	1.25G Ethernet Tranceiver, Multi-mode, SFP Type, 1310nm,	* •		
	FP-LD-2Km, Duplex LC, DC 3.3V	No	2	
112	M- SERIES 2KVA ON-LINE RACK/TOWER UPS.	No	1	
	RAIL KIT FOR RACK MOUNT UPS	No	1	
1131		110	_	
3	and the second second second second			
114	Acconet CAT6 UTP Flylead, 1 Meter, Straight, Stranded Cable,	Nr.	:	
	Moulded Boots and Plugs, Blue	No	3	
115	Acconet CAT6 UTP Flylead, 1 Meter, Straight, Stranded Cable,	14-		
	Moulded Boots and Plugs, Green	No	12	
1161	LEAD MM RUGG DUPLEX LC – LC 150m	No	1	
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	Electronics			

CCTV AND ACCESS CONTROL HEADEND FOR CONTROL	,		1	Amount
ROOM Dahua 4K 64ch NVR - 1.5U, 320Mbps, upto 24MP, 4HDD upto 10TB each, 1 CH fisheye de- warping, Al by Camera, 2 x HDMI, 2 x VGA	No	2		
Western Digital 10TB Surveillance Hard Drive – 3.5" SATA, 6Gb/s, 256MB Cache – 30 DAYS STORAGE 25FPS	No	4		;
Carried to Collection	1		R	
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Section No. 4 Bill No. 10 Electronics		:		

ı		Unit	Quantity	Rate	Amount
119	32" Monitor – HDMI, VGA, wall mountable	No	4		
120	WALL MOUNT BRACKET 32–55" WITH TILT	No	4		
121	HDMI Cable, HDMI 19PIN, 10m	No	4		
122	Dell i5; 4GB; 1TB HDD	No	1		
123	24" Wide HD Monitor – HDMI, Wall mountable	No	1		
124	EC3 Portal Linux OS application controller(IPS Housing)	No	1	i	
125	MSO dongle verification (includes SWQ/MorphoPak LIC) WHILE STOCKS LAST	No	1		
126	Impro Access Portal Basic - Single site windows based client software, up to 10APB doors, 1000 tag holders	No	1		
127	Acconet 27U 19" Assembled Rack, 1000mm Deep, Black, Clear Glass Door with Lock, 4 220V Fans, 2 Shelve	No	1		
128	Acconet Blanking Plate, 1U, Black	No	2		
129	Acconet Brush Panel 1U, 19", Back	No	1		
130	12*SFP, 2*RJ45, 2*SFP+, L2 Plus Gigabit Master Switch Built- in Device Management System (DMS) Software	No	1		
131	24*RJ45, 4*SFP+, L2 Pro Gigabit Master Switch Built-in Network Topology System (NTS) Software	No	1		
132	M-SERIES 3KVA ON-LINE RACK/TOWER UPS	No	1		
133	RAIL KIT FOR RACK MOUNT UPS	No	1		
	CABLE AND CONNECTORS				
134	Mylar Screened Cable – grey, 4 pair twisted 100mm roll, 0.22mm, stranded	No	2		
135	CABLE CAT6 UTP 500M ROLL BLUE	No	6		
136	CABLE CAT6 UTP 500M ROLL GREEN	No	7		
137	Connector- Crimp type RJ45 male	No	250		-
138	Acconet RJ45 Connector Boots, Blue, 50 Pack	No	2		
139	Acconet RJ45 Connector Boots, Green, 50 Pack	No	3		
140	Ubiquiti Ethernet Surge Protector, Gen 2	No	170		
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	Bill No. 10				
	Electronics		!		
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		Unit	Quantity
	PA WITH VOICE EVACUATION		
141	Voice Alarm System Amplifier 360W – 6 Zone	No	1
142	Remote Microphone connects to the VM – 3240VA, VM – 2120 and VM – 2240 for the purpose of making emergency/general broadcast announcements	No	. 1
143	Emergency Power supply unit for Evac System (Supplies DC Power to VX – 2000 and VM – 3000	No	1
144	12 VOLT 65 A/H BATTERY (Special sealed battery certified for use with VA System)	No	2
145	Ceiling Speaker 5inch 6W, 200 Hz – 20kHz, firedome, Ceramic terminal, thermal fuse, EN54, BS	No	105
146	Wall Speaker White, Certified BS and EN54-24 - suitable for announcement and music	No	5
1471 4 7	2-way Bass- Reflex Speaker (30W) Black	No	3
•		No	3
1491 4 9		No	6
150	16U Rack Incl. DIN Rails, Wiring & Accessories etc.	No	1
151	LABOUR FOR RACK WORK	No	8
1521 5 2		No	1
5	Fire Retardant Cable 2 x 1mm.sq. – PH30 – 100/100V per m (Please note this is only an estimate, additional cablling maybe required)	No	3 600
	ELECTRIC FENCE		
1541 5 4	Druid 28 LCD Energizer	No	2
155	Enclosure-Steel Powd/Coat H600x460xD230	No	2
156	Siren-15W-12VDC	No	2
	Section No. 4 Bill No. 10		

Electronics

157	Light - Nemtek Strobe RED LED - 12V	No	4	Amount
1581	Fence Light- Timed light - Galv- Dark Grey	No	4	
5		-		
4504	Duvid Kovand 2 Zono	No	1	
1591 5	Druid Keypad – 2 Zone			
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L	Double Pole Lightning- Inhibitor/ Divertor	No	4	
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	Unit	Quantity	Rate
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161 Olarm GSM monitoring unit (24 MONTH)	No	2	
1621 Druid 2x Synchronisation module	No	2	
6 2	:		• •
1631 Free Standing- Omega - 2.4m - HDG - 2mm	No	28	
6 3	:		
1641 Free Standing – Omega – 2.4 Pregalv Z275	No	405	and the second second
6 4		:	ý.
1651 Tek Screw – 12 * 25mm HDG	No	3 500	
6 5			
1661 Free Standing S – Hoog HDG	No	1 700	
6 6			. •
167 Combo Tensioner Hybrid – Black BB – 120kg	No	850	1. 0
168 Aluminium Wire – Stranded – 2.0mm – 1000	No	40	
1691 Ferrules – 10mm Aluminium (100 pack)	No	25	
6 9	i i		
1701 Insulator - Omega with Clip- Black	No	12 200	
7 0	**		
1711 Warning Sign – Nemtek	No	130	
7 1	W		
1721 HT Cable - Black - Aluminium- 100m	No	9	
7 2	149		
1731 Earth Spike- Copper - 1.2m (inc nut/washer)	No	45	
7 3		4527	
1741 Strain Ultra insulator – Black	No	850	
7 4	Sa _s	\$5 - 14	
175 Sliding Gate Contact – Universal Bracket	No	2	
176 Sliding Gate Contact – In Line – 3 Way	No	- 2	
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Electronics

1771	Conduit, bends, couplings, sprag, cable ties and drill bits	No	1 1	∥ Amount	
7	Committee of the Commit				
7			~ 4		
1781	Install and setup the above equipment	No	25		
7	,				
8		141			
1791	Issue a certificate of compliance on the new fence	No	1		
7					
9					
1801	Accomodation and meals	No	100		
8					
Ψ					
	PERIMETER CAMERAS				
181	Custom 6m Pole Power Coated	No	23		
	Dahua 2MP IP Vandal Bullet, 2.7 35mm Lens – 130m IR, 2/1				
182	Alarm in/out, 1/1 audio in/out, Micro SD Memory, IP67,	No	23		
į	IK10		į		
42-	4.C UDD CM/0/13E\	No	2 300		
1831	4 Core HDD SM (9/125)	No	2 300		
3		:			
104	FIBRE SPLICE TRAY + 24 PORT ST	No	1		
184	FIBRE SPLICE TRAT # 24 FORT 51				
185	SCOTCH BOX 12 FIBRE ST	No	23		
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1		Unit	Quantity	Rate	Amount	
186	SPLICE CASSETTE	No	23			
187	LC (9/125) UNJACKETED PIGTAIL	No	26			
188	LC-LC MIDCOUPLER SINGLE MODE	No	52			
189	LC (9/125) DUPLEX PATCH CORD 1	No	52			
190	UTP-Network Cable	No	150			
191	1.2 KVA Tower UPS. Monitored. Online	No	23			i
192	Civils to Plate Pole	No	23			
193	Fibre Optic Splicing	No	52			
194	Fibre Optic Consumables	No	1			
195	DAhua Pole Mount Bracket & Plate – for with most bullet/eyeball/dome 125.6mm x 114mm x 20mm	No	23			
196	Outdoor 4*30W PoE, 2*SFP, 2RJ45 Switch AC Power on/off switch Total power budget: 150W IP67/IK10 cast aluminium Cabinet 6KV PoE surge protection, 40KV AC surge protection					
	Operating temperature –40 C 65 C	No	12			
197	Pole mount adaptor	No	12			
198	Fiber Panel for H60/H40 – v3 Series	No	12			
199	Industrial 1.25G Ethernet Transceiver, Multi-mode, SFP Type, 1310nm, FP-D-2Km, Duplex LC, DC 3.3V	No	12			
	ADDITIONAL COSTS					
200	Testing and Commisioning	No	2			
201	Training of Staff	No	1			
202	Operator Manuals	No	1			
	LABOUR, PROJECT MANAGEMENT & TRAVEL					
203	labour Cost	No	48			
204	Project Management	No	1			
205	safety Compliance Cost	No	1			
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	Section No. 4					
	Bill No. 10					
	Electronics 229					
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ı		Unit	Quantity	Rate	Amount
	FIRE DETECTION				
	Fire Detection Level 1				
	Supply and installation, including all necessary Accessories to complete installation, Conduits etc.		ı		
206	Electronic Sounder, 102db @ 1m, IP54	No	8		
207	Red Flashing Beacon, 230V ac, LED Bulb	No	32		
208	Red Break Glass Call Point, Resettable, 87x87x53mm. IP 67	No	10		
209	Addressable Optical Smoke Detectors (Compliant with Sans 50054–7)	No	40		
210	Heat Detector	No	2		
211	12 zone, 2 loops, addressable Fire Alarm Control Panel witn back up Power	No	1		
212	Mineral Insulated copper sheathed cables with an Overal polymeric covering, complying with terminations complying with EN 60702–2, BS 7629, BS 7846. With Voltage rating of 300/500V or Greater.	m	700		
213	20mm² Galvanized Conduit	m	600		
214	Certification and commissioning by Fire Engineer for all Levels (1–6).	No	1		
215	Documentation and accredited training for operating personel, for all Levels (1–6).	No	1		
216	Fire System Interface with Fire Department and HVAC System.	No	1	ĺ	
	Fire Detection Level 2				
217	32 Tone Electronic Sounder, 9–28V dc 102db, IP54	No	10		
218	Red Flashing Beacon, 230V ac	No	20		
219	Red Break Glass Call Point, Resettable, 87x87x53mm	No	10		
220	Optical Smoke Detectors (Compliant with Sans 50054–7)	No	40		
221	Heat Detector	No	2		
222	12 zone, 2 loops, addressable Fire Alarm Control Panel with back up Power	No	.1		
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	Electronics 230				

Ī		Unit	Quantity	Rate	Amount
223	Mineral Insulated copper sheathed cables with an Overal polymeric covering, complying with terminations complying with EN 60702–2, BS 7629, BS 7846. With Voltage rating of	•			
	300/500V or Greater.	m	800		
224	20mm² Galvanized Conduit	m	560		
Ì	Fire Detection Level 3				
225	32 Tone Electronic Sounder, 9–28V dc 102db, IP54	No	3		
226	Red Flashing Beacon, 230V ac	No	15		
227	Red Break Glass Call Point, Resettable, 87x87x53mm	No	3		
228	Ionization chamber Smoke Detector	No	14		
229	12 zone, 2 loops, addressable Fire Alarm Control Panel with back up Power	No	1		
230	Mineral Insulated copper sheathed cables with an Overal polymeric covering, complying with terminations complying with EN 60702–2, BS 7629, BS 7846. With Voltage rating of				
	300/500V or Greater.	m	450		
231	20mm ² Galvanized Conduit	m	315		
	Fire Detection Level 4				
232	32 Tone Electronic Sounder, 9–28V dc 102db, IP54	No	2		
233	Red Flashing Beacon, 230V ac	No	8		
234	Red Break Glass Call Point, Resettable, 87x87x53mm	No	2		
235	Ionization chamber Smoke Detector	No	9		
236	Mineral Insulated copper sheathed cables with an Overal polymeric covering, complying with terminations complying with EN 60702–2, BS 7629, BS 7846. With Voltage rating of				
	300/500V or Greater.	m	450		
237	20mm² Galvanized Conduit	m	315		
ı	Fire Detection Level 5				
238	32 Tone Electronic Sounder, 9–28V dc 102db, IP54	No	5		
239	Red Flashing Beacon, 230V ac	No	14		
240	Red Break Glass Call Point, Resettable, 87x87x53mm	No	- 3		
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ı		Unit	Quantity	Rate	Amount
241	Ionization chamber Smoke Detector	No	14		
242	Mineral Insulated copper sheathed cables with an Overal	:			
	polymeric covering, complying with terminations complying with EN 60702-2, BS 7629, BS 7846. With Voltage rating of	- ,	. 1		
	300/500V or Greater.	m	450		
243	20mm² Galvanized Conduit	m	315		
	Fire Detection Guard House				
244	32 Tone Electronic Sounder, 9–28V dc 102db, IP54	No	1		
245	Red Flashing Beacon, 230V ac	No	3		
246	Red Break Glass Call Point, Resettable, 87x87x53mm	No	3		
247	Ionization Chamber Smoke Detector	No	6		
248	Mineral Insulated copper sheathed cables with an Overal polymeric covering, with terminations complying with EN				
	60702–2, BS 7629, BS 7846. With Voltage rating of 300/500V or Greater.	· m	450		
240	20mm² Galvanized Conduit	m	315		
249	20mm- Galvanized Conduit	.,,,			
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	SECTION NO. 4		
	ELECTRICAL INSTALLATION		
	SECTION SUMMARY		
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1	SUPPLEMENTARY PREAMBLES	177	
2	SITEWORKS	184	
3	LEVEL 1	189	
4	LEVEL 2	195	
5	LEVEL 3	200	
6	LEVEL 4	204	
7	LEVEL 5	208	
8	GUARD HOUSE	212	
9	ELECTRICAL PROVISIONAL SUMS	213	
10	ELECTRONICS	230	
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SECTION NO. 5 MECHANICAL INSTALLATION

	ı	II.	Amount	
	SECTION NO. 5			
	MECHANICAL INSTALLATION			
	BILL NO. 1			
i	PRELIMINARIES			
	(CPAP WORK GROUP NO. 190 UNLESS OTHERWISE STATED)			
	TOTAL WORK GROOT TOTAL STREET			
ŀ	GENERAL PRELIMINARIES			
1	Fixed Cost Items (SABS 1500 sa 8.3)	ltem		
	F: V: T:			
2	Contract Requirements	ltem		
	F: V: T:			
3	Site Establishment	ltem		
	F: V: T:			
4	Office & Stores	ltem		
	F: V: T:			
5	Workshop	Item		
	F: V: T:			
6	Ablutions & Latrines	Item		
	F: V: T:	ltom		
7	Water, Electricity and Telephone connections	Item		
	F: V: T:	ltem		
8	Removal of Contractor's site facilities upon completion	item		
	F: V:	ltem		
9	Variables with Contract Period (SABS 1500 SA 8.4)	item		
	F: V: T:	ltem		
10	Contractual Requirements	100111		
	F:	ltem		
11	Operate and maintain facilities on site as per site establishment items			
	F: V: T:	ltem		
12	Company Head Office overhead costs			
	F:	Item		
13	Supervision			
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15	Allow for joint programming of all aspects of the work with the appointed Main contractor undertaking the building contract so that each Contractor has access. Allow for disruptions as may occur arising from jointly working on the site. No claims for delays or associated P&G costs will be entertained	ltem		
	F: V: T:			
16	Quality & Scope of Work	ltem		
17	F: V: T:	ltem		
18	F: V: T:	Item		
19	F: V: T:	Item	:	
20	F: V: T:	ltem		
21	F: V: T:	Item		
22	F: V: T:	ltem		
23	F: Protection of Equipment against damage during construction	Item		
24	F:	ltem		
25	F:	ltem		
26	F:	ltem		
27	F:	Month		
28	F: V: T: Maintenance of Equipment as per specification in YEARS	Year		
29	F: V: T:	ltem		
30	F:	ltem		
31	F:	ltem		
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Electrical work as required	Item	
F: V: T:		
Workshop Drawings	Item	
F: V: T:		
Testing, balancing and commissioning	Item	
F: V: T:		
Documentation	Item	
F:		
outer panel door.	ltem	
F: V: T:		
O & M manuals including as built drawings in hard copy and on CD	Sets	
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2 Year Service during guarantee period	ltem	
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Section No. 5	34.7.32 . 2 300001 32.111101 9	,,			
Bill No. 1 Preliminaries	ļ				
	239				

		Unit	Quantity	Rate	Amount
	SECTION NO. 5				
	MECHANICAL INSTALLATION				
	BILL NO. 2				
	HEATING, VENTILATION AND AIR-CONDITIONING				
	HEATING, VENTILATION AND AIR CONDITIONING				
	Manufacture (where required), supply, delivery, installation, commissioning and testing of all systems stated below. Rates to be inclusive any and all associated costs. Refer to detailed specification before pricing Backstage	Eg Salvar	tt war vite ook di		
1	Backstage Air Handling Unit Location of Installation: Backstage C Cap: 90 kWT H Cap: 90 kWT Air Supply: 1650L/s @ 450Pa Supply: 3Ph / 380–420V / 50Hz	No	2		
2	Backstage Outdoor Condenser Unit Location of Installation: Roof Cooling Capacity: 180 kW Heating Capacity: 180 kW Electrical Power Supply: 3Ph / 380–415V / 50Hz	Sets	1		
3	AHU to Condenser Kit Supply: 1Ph / 220–240V / 50Hz	No	1		
4	AHU to Condenser EEV Kit Supply: 1Ph / 220–240V / 50Hz	No	1		
5	AHU to Condenser Control Kit Supply: 1Ph / 220–240V / 50Hz	No	1		
6	Wired Remote Control	No	1		
	AC/Armaflex Insulated Hard drawn Refrigeration Copper				
	Pipes				
7	Ø12.7mm	m	24		
8	Ø19.05mm	m	94		
9	Ø28.58mm	m	8 - 8		
10	Ø34.92mm	m	8		
11	Ø41.28mm	m	92		
12	Outdoor Unit Y Joint	No	3		
13	Indoor Unit Y Joint	No	2		
14	100mm Wide 0.5mm Thick Sheet Metal Galvanised Steel Cable Tray with Cover	m	28		
1 .5	200mm Wide 0.5mm Thick Sheet Metal Galvanised Steel Cable Tray with Cover	m	72		
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	Carried to Collection			R	
	Section No. 5 Bill No. 2				
	Heating, Ventilation And Air–conditioning				
	240		1		

		Unit	Quantity	Rate	Amount	
16	WÜRTH R410a Refrigeration Gas	·Кg	25			
	Backstage Air Supply Distribution Ducting Network Dual Wall Insulated (51mm Fibrous Glass Duct Wrap) Galvanized Steel Ducting as per SANS 1238:2002					
17	1200 x 1000mm to 900 x 750mm – Transformer	No	2	į		
18	900 x 750mm x 1m Rectangular Duct Silencer	No	2			
19	900 x 750mm x 90° Bend	No	4			
20	900 x 750mm Rectangular Straight Duct	m	10			
21	900 x 750mm to 600 x 750 Reducer	No	2			
22	650 x 750mm Rectangular Straight Duct	m	6			
23	600 x 750mm to 400 x 600 Reducer	No	2			
24	400 x 600mm Rectangular Straight Duct	m	6			
25	400 x 600mm Stop Eng	No	2			
	Backstage Return Air Supply Distribution Ducting Network Dual Wall Insulated (51mm Fibrous Glass Duct Wrap) Galvanized Steel Ducting as per SANS 1238:2002					
26	1200 x 1000mm to 900 x 750mm - Transformer	No	2			
27	900 x 750mm x 90° Bend	No	4			
	Duct Support Structure, Diffusers, Balancing Dampers and Grilles					
28	Vertical Duct Support Structure Material: Angle Iron Bolted to Wall	No	28			
29	Horizontal Duct Support Structure Material: Angle Iron Bolted to Floor Slab	No	6	:		
30	Aluminium, with a standard Powder Paint Finish Jet Diffuser complete with Duct Adapter and Air Balancing Damper Size: Ø 500 mm, Neck: Ø 200 mm, Flow: 500L/s	No	6			
31	800 x 800mm Aluminium External Wall Mounted Weather	-				
	Louvered Grille	No	2			
32	900 x 750mm Aluminium Weather Louvered Grille	No	1		'	
33	900 x 750mm Rectangular Balancing Damper	No	2			
	Carried to Collection			R		
	Section No. 5					
	Bill No. 2 Heating, Ventilation And Air-conditioning					
	241					

1		Unit	Quantity	Rate	Amount
34	650 x 750mm Rectangular Balancing Damper	No	2		
35	400 x 600mm Rectangular Balancing Damper	No	2		
	Public Circulation / Lobby HVAC System		İ		
36	Public Circulation / Lobby Air Handling Unit Location of Installation: Concrete Roof C Cap: 200 kWT H Cap: 200 kWT Air Supply: 3000L/s @ 550Pa Supply: 3Ph / 380–420V / 50Hz	No	1		
37	Public Circulation / Lobby Outdoor Condenser Unit Location of Installation: Roof Cooling Capacity: 200 kW Heating Capacity: 200 kW Electrical Power Supply: 3Ph / 380-415V / 50Hz				
		Sets	1		
38	AHU to Condenser Kit Supply: 1Ph / 220–240V / 50Hz	No	1		
39	AHU to Condenser EEV Kit Supply: 1Ph / 220–240V / 50Hz	No	1		
40	AHU to Condenser Control Kit Supply: 1Ph / 220–240V / 50Hz	No	1		
41	Wired Remote Control	No	1	i	
	AC/Armaflex Insulated Hard drawn Refrigeration Copper Pipes				
42	Ø12.7mm	m	8		
43	Ø15.88mm	m	10		
44	Ø19.05mm	m	62		
45	Ø22.22mm	m	4		
46	Ø28.58mm	m	8		
47	Ø34.92mm	m	8		
48	Ø38.1mm	m	60		
49	Ø41.28mm	m	38		
50	Ø53.98mm	m	52		
51	Outdoor Unit Y Joint	No	5		
52	Indoor Unit Y Joint	No	2		
53	100mm Wide 0.5mm Thick Sheet Metal Galvanised Steel Cable Tray with Cover	m	14		
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	Carried to Collection			R	
	Section No. 5				
	Bill No. 2 Heating, Ventilation And Air-conditioning				
	242	}			

		Unit	Quantity	Rate	Amount	
54	200mm Wide 0.5mm Thick Sheet Metal Galvanised Steel					
	Cable Tray with Cover	m	28			
55	WÜRTH R410a Refrigeration Gas	Kg	32			
	Public Circulation / Lobby Air Supply Distribution Ducting Network Dual Wall Insulated (51mm Fibrous Glass Duct Wrap) Galvanized Steel Ducting as per SANS 1238:2002					
56	1500 x 1200mm to 900 x 1000mm – Transformer	No	1			
57	900 x 1000mm x 1.2m Rectangular Duct Silencer	No	2			
58	900 x 1000mm x 90° Bend	No	2			
59	900 x 1100mm Rectangular Straight Duct	m	20			
60	900 x 1100mm to 750 x 900 to 750 x 750 - 3 Way Junction					
	and Reducers	No	1			
61	900 x 750mm Rectangular Straight Duct	m	10			
62	900 x 750mm to 600 x 750 Reducer	No	2			
63	650 x 750mm Rectangular Straight Duct	m	6			
64	600 x 750mm to 400 x 600 Reducer	No	2			
65	400 x 600mm Rectangular Straight Duct	m	6			
66	400 x 600mm Stop Eng	No	2			
	Public Circulation / Lobby Return Air Supply Distribution Ducting Network Dual Wall Insulated (51mm Fibrous Glass Duct Wrap) Galvanized Steel Ducting as per SANS 1238:2002					
67	1500 x 1200mm to 900 x 1000mm – Transformer	No	1			
68	900 x 1000mm x 90° Bend	No	2			
69	900 x 1100mm Rectangular Straight Duct	m	10			
	Duct Support Structure, Diffusers, Balancing Dampers and Grilles			•		
70	Vertical Duct Support Structure Material: Angle Iron Bolted to	٠.				
	Wall	No	28			
71	Horizontal Duct Support Structure Material: Angle Iron Bolted to Floor Slab	No	6			
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	Carried to Collection			R		
	Section No. 5					_
	Bill No. 2					
	Heating, Ventilation And Air-conditioning 243					
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ı		Unit	Quantity	Rate	Amount
72	Aluminium, with a standard Powder Paint Finish Jet Diffuser complete with Duct Adapter and Air Balancing Damper Size: Ø 500 mm, Neck: Ø 200 mm, Flow: 500L/s	No	6		
73	800 x 800mm Aluminium External Wall Mounted Weather Louvered Grille	No	2		
74	900 x 750mm Aluminium Weather Louvered Grille	No	1		
75	900 x 750mm Rectangular Balancing Damper	No	2		
76	650 x 750mm Rectangular Balancing Damper	No	2		
77	400 x 600mm Rectangular Balancing Damper	No	2		
	Main Theatre HVAC System				
78	Public Circulation / Lobby Air Handling Unit Location of Installation: Concrete Roof C Cap: 235kWT H Cap: 235 kWT Air Supply: 3200L/s @ 550Pa Supply: 3Ph / 380–420V / 50Hz	No	2		
79	Public Circulation / Lobby Outdoor Condenser Unit Location of Installation: Roof Cooling Capacity: 470 kW Heating Capacity: 470 kW Electrical Power Supply: 3Ph / 380–415V / 50Hz	Cata		1	;
	30112	Sets	1		
80	AHU to Condenser Kit Supply: 1Ph / 220–240V / 50Hz	No	2		
81	AHU to Condenser EEV Kit Supply: 1Ph / 220–240V / 50Hz	No	2		
82	AHU to Condenser Control Kit Supply: 1Ph / 220–240V / 50Hz	No	2		
	AC/Armaflex Insulated Hard drawn Refrigeration Copper Pipes				
83	Ø15.88mm	m	8		
84	Ø19.05mm	m	35		
85	Ø22.22mm	m	75		
86	Ø28.58mm	m	8		
87	Ø31.75mm	m	20		
88	Ø34.92mm	m	4		
89	Ø38.1mm	€ m	25		:
90	Ø41.28mm	m	50		
91	Ø53.98mm	, m	125		
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	Section No. 5 Bill No. 2				
	Heating, Ventilation And Air–conditioning	: -			
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			Quantity	Rate	Amount	ı
		2.4				
92	Refnet Joint (MXJ–YA4422M)	No	4			
93	Outdoor Unit Joint (MXJ–TA3419M)	No	4			
94	Outdoor Unit Joint (MXJ-TA4122M)	No	6			
95	100mm Wide Galvanised Steel Wire Cable Tray	m	26			
96	200mm Wide Galvanised Steel Wire Cable Tray	m	76		 	
97	WÜRTH R410a Refrigeration Gas	Kg	81	-1	a sa	
:	Main Theatre Air Supply Distribution Ducting Network Dual Wall Insulated (51mm Fibrous Glass Duct Wrap) Galvanized Steel Ducting as per SANS 1238:2002					
98	1200 x 1000mm to 850 x 850mm - Transformer	No	2			
99	850 x 850mm to 850 x 850mm to 350 x 850mm - 3 Way Junction	No	2			
100	850 x 850mm to 500 x 850mm to 350 x 850mm – 3 Way Junction	No	2	·		
101	500 x 850mm to 350 x 850mm to 350 x 850mm - 3 Way Junction	No	2			
102	850 x 850mm Rectangular Duct 90° Bend	No	8			
103	350 x 850mm Rectangular Duct 90" Bend	No	2			
104	Ø150mm Round Duct 90° Bend (Connected to 350 x 850mm Rectangular Duct)	No	72			
105	350 x 850mm Rectangular Straight Duct	m	108			
106	500 x 850mm Rectangular Straight Duct	m	10			
107	850 x 850mm Rectangular Straight Ducth Change Cleaner of the land	m	60			
108	Ø150mm Round Straight Duct またれ	m	108			
109	Ø150mm Round Straight Duct (Flexible)	m	36			
	Main Theatre Return Air Supply Distribution Ducting Network Dual Wall Insulated (51mm Fibrous Glass Duct Wrap) Galvanized Steel Ducting as per SANS 1238:2002	Wyn.	:			
110	1200 x 1000mm to 850 x 850mm – Transformer	No	1			
111	850 x 850mm x 90° Bend	No	1			
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	Bill No. 2 Heating, Ventilation And Air-conditioning					
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		Unit	Quantity	Rate	Amount
		-			
112	850 x 850mm Rectangular Straight Duct	m	15		
	Duct Support Structure, Diffusers, Balancing Dampers and Grilles	A	· .		
113	Vertical Duct Support Structure Material: Angle Iron Bolted to Wall	No	105		
114	Horizontal Duct Support Structure Material: Angle Iron Bolted				
	to Floor Slab	No	358		
115	Powder Coated Circular Aluminium Perforated Front Plate Circular Front Plate Underfloor Diffuser with circular duct connection/adapter kit and Air Flow Balancing Damper Diffuser Size: Ø200 – Ø250mm, Neck: Ø150 mm, Flow: 45L/s		144		
		No	144		
116	800 x 800mm Aluminium External Wall Mounted Weather Louvered Grille	No	2		
117	900 x 750mm Aluminium Weather Louvered Grille	No	1		
118	350 x 850mm Rectangular Balancing Damper	No	8		
119	Ø150mm Round Balancing Damper	No	144		
	Second Theatre HVAC System				
120	Second Theatre Outdoor Condenser Unit Location of Installation: Roof Cooling Capacity: 56 kW Heating Capacity: 63 kW Electrical Power Supply: 3Ph / 380–415V / 50Hz"	Sets	1		
121	Second Theatre Air Handling Unit Location of Installation: Concrete Roof C Cap: 28kWT H Cap: 31.5kWT Air Supply: 3200L/s @ 550Pa Supply: 3Ph / 380~420V / 50Hz"	No	2		
122	Wired Remote Control	No	2		
	AC/Armaflex Insulated Hard drawn Refrigeration Copper Pipes				
123	Ø6.35mm	m	80		
124	Ø9.52mm	m	82		
125	Ø12.7mm	m	83		
126	Ø15.88mm	m	58		
127	Ø19.05mm	m	80		
128	Ø22.22mm	m	48		
	Carried to Collection			R	
	Section No. 5				
	Bill No. 2 Heating, Ventilation And Air-conditioning				
	246		,		

		Unit	Quantity	Rate
129	Ø28.58mm	m	32	
130	Ø34.92mm	m	31	
131	Ø41.28mm	m	4	
132	Refnet Joint (MXJ-YA2815M)	No	1	
133	100mm Wide Galvanised Steel Wire Cable Tray	m	42	
134	200mm Wide Galvanised Steel Wire Cable Tray	m	92	
135	WÜRTH R410a Refrigeration Gas	Kg	42	
	Second Theatre Air Distribution Ducting Network Comprifix Insulated Flanged Galvanised Steel Ducting as per SANS 1238:2002 E2			
136	800 x 500mm to Ø600mm – Transformer	No	2	
137	600 x 600mm to Ø600mm – Transformer	No	2	
138	600 x 500mm to Ø600mm – Transformer	No	2	
139	400 x 400mm to Ø400mm – Transformer	No	2	
140	Ø500mm to Ø450mm x Ø200mm to Ø200mm – 4 Way Junction	No	2	
141	Ø450mm to Ø350mm x Ø200mm to Ø200mm – 4 Way Junction	No	2	
142	Ø350mm to Ø250mm x Ø200mm to Ø200mm – 4 Way Junction	No	2	
143	Ø250mm to Ø250mm x Ø200mm to Ø200mm 4 Way			
	Junction	No	2	
144	Ø600mm Round Duct 90° Bend	No	2	
145	Ø500mm Round Duct 90° Bend	No	2	
146	Ø200mm Round Duct 90° Bend	No	16	
147	Ø600mm Round Duct	m	12	
14 8	Ø500mm Round Duct	m	8	
149	Ø450mm Round Duct	m	8	
	Ø400mm Round Duct	m	12	
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Section No. 5
Bill No. 2
Heating, Ventilation And Air-conditioning

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Section No. 5				
Bill No. 2				
Heating, Ventilation And Air-conditioning				
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		Unit	Quantity	Rate	Amount	
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151	Ø350mm Round Duct	m	8			
152	Ø250mm Round Duct	m	8			
153	Ø200mm Round Duct	m	32			
	9 3					
1541	L Ø250mm Round Duct End Cap	No	4			
	5 1					
1551	L 600 x 600mm Filter Box with Washable Bag Filter (with					
	5 Ø600mm inlet and outlet) 5	No	2			
156	Ø600mm Fire Smoke Damper	No	2			
157	400 x 400mm Filter Box with Washable Bag Filter (with					
	Ø400mm inlet and outlet)	No	2			
158	Ø400mm Fire Smoke Damper	No	2	* * · .		
159	VAV Box (3 Way) Inlet 1: Ø600mm, Inlet 2: Ø400mm Outlet: Ø750mm				·	
		No	2			
160	Hanging Duct Support Structure Material: Angle Iron with Hanging Rods Hooked onto Roof Structure	No	56			
161	Powder Coated Constant Volume Diffuser with Duct Adapter					
	and Air Flow Balancing Damper Size: 600 x 600mm, Neck: Ø200mm, Flow: 100L/s	No	16			
160	600 x 600mm Aluminium Louvered Return Air Grille	No	2			
162	600 x 600mm to Ø600mm Neck – Transformer	No	2			
163		No	2			
164	400 x 400mm Aluminium Weather Louvered Wall Grille	No No	2			
165	400 x 400mm to Ø400mm Neck – Transformer		2			
166	Ø500mm x 1m Round Duct Silencer	No	16			
167	Ø200mm x 1m Round Duct Silencer	No	10			
168	South Wing System North Wing Outdoor Condenser Unit Location of Installation:	4,				
100	Roof Cooling Capacity: 78.6 kW Heating Capacity: 88.2 kW Electrical Power Supply: 3Ph / 380–415V / 50Hz"		4			
		No .	1			
169	Dance Studio 1 Hide Away Unit C Cap: 22.4kWT H Cap: 25.0kWT Supply: 1Ph / 220-240V / 50Hz	No	1			
	Section No. 5	: -				
	Bill No. 2					
	Heating, Ventilation And Air-conditioning					
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Section No. 5
Bill No. 2
Heating, Ventilation And Air-conditioning

ı		Unit	Quantity	Rate	Amount	
		·				
170	Dance Studio 2 Hide Away Unit C Cap: 14.0kWT H Cap: 16.0kWT Supply: 1Ph / 220–240V / 50Hz	No	1			
171	Poetry Room 1 Hide Away Unit C Cap: 14.0kWT H Cap: 16.0kWT Supply: 1Ph / 220-240V / 50Hz	No	1			
172	Poetry Room 2 Hide Away Unit C Cap: 14.0kWT H Cap: 16.0kWT Supply: 1Ph / 220–240V / 50Hz	No	1			
173	Open Plan Cassette Unit C Cap: 5.6kWT H Cap: 6.3kWT Supply: 1Ph / 220–240V / 50Hz	No	1			
174	Staff Office Cassette Unit C Cap: 5.6kWT H Cap: 6.3kWT Supply: 1Ph / 220–240V / 50Hz	No	1			
175	Managers Office High Wall Unit C Cap: 2.8kWT H Cap: 3.2kWT Supply: 1Ph / 220–240V / 50Hz	No	1			
176	Creative Managers Office High Wall Unit C Cap: 2.8kWT H Cap: 3.2kWT Supply: 1Ph / 220-240V / 50Hz	No	1			
177	Office High Wall Unit C Cap: 2.8kWT H Cap: 3.2kWT Supply: 1Ph / 220-240V / 50Hz	No	1			
178	Mode Change Unit Type 1 (MCU-S4NEK3N)	No	2			
179	Mode Change Unit Type 2 (MCU-S6NEK2N)	No	1	ŀ		
180	Wireless Remote Control	No	3			
181	Wired Remote Control	No	6			
	AC/Armaflex Insulated Hard drawn Refrigeration Copper Pipes					ļ
182	Ø6.35mm	m	155			
183	Ø9.52mm	m	19			
184	Ø12.7mm	m	192			
185	Ø15.88mm	m	83			
186	Ø19.05mm	m	105			
187	Ø22.22mm	m	25			
188	Ø28.58mm	m	45			
189	Ø34.92mm	m	25			
	Carried to Collection			R		
	Section No. 5					
	Bill No. 2					
	Heating, Ventilation And Air-conditioning 251					

ı		Unit	Quantity	Rate	Amount	
190	Refnet Joint (MXJ-YA3419M)	No	2			
191	Refnet Joint (MXJ-YA3100M)	No	2			
192	100mm Wide Galvanised Steel Wire Cable Tray	m	62			
193	200mm Wide Galvanised Steel Wire Cable Tray	m	56			
194	WÜRTH R410a Refrigeration Gas	Kg	40			
	Dance Studio 1, Poetry Room 1 and 2 Air Distribution Ducting Network Comprifix Insulated Flanged Galvanised Steel Ducting as per SANS 1238:2002 E2					
195	800 x 600mm to Ø600mm – Transformer	No	6			
196	Ø550mm to Ø400mm x Ø300mm to Ø300mm – 4 Way Junction	No	3			
197	Ø400mm to Ø400mm x Ø300mm to Ø300mm – 4 Way Junction	No	3			
198	Ø550mm Round Duct 90° Bend	No	3			
199	Ø450mm Round Duct 90° Bend	No	3			
200	Ø300mm Round Duct 90° Bend	No	12			
201	Ø550mm Round Duct	m	22			
202	Ø450mm Round Duct	m	12			
203	Ø400mm Round Duct	m	13			
204	Ø300mm Round Duct	m	48			
205	Ø400mm Round Duct End Cap	No	3			
206	450 x 450mm Filter Box with Washable Bag Filter (with Ø450mm inlet and outlet)	No	3			
207	Ø450mm Fire Smoke Damper	No	3			
208	300 x 300mm Filter Box with Washable Bag Filter (with Ø300mm inlet and outlet)	No	3			
209	Ø300mm Fire Smoke Damper	No	6			
210	VAV Box (3 Way) Inlet 1: Ø450mm, Inlet 2: Ø300mm, Outlet: Ø550mm	No	6			
	Carried to Collection			R		
	Section No. 5					
	Bill No. 2 Heating, Ventilation And Air-conditioning			!		
	Heating, ventilation And All-Conditioning 252					

		Unit	Quantity	Rate	Amount
211	Hanging Duct Support Structure Material: Angle Iron with Hanging Rods Hooked onto Roof Structure	No	45		
212	Powder Coated Constant Volume Diffuser with Duct Adapter and Air Flow Balancing Damper Size: 600 x 600mm, Neck: Ø300mm, Flow: 225L/s	No	12		
213	500 x 500mm Aluminium Louvered Return Air Grille	No	3		
214	500 x 500mm to Ø450mm Neck – Transformer	No	3		
215	300 x 300mm Aluminium Weather Louvered Wall Grille	No	3		
216	300 x 300mm to Ø300mm Neck – Transformer	No	3		
217	Ø550mm x 1m Round Duct Silencer	No	3		
218	Ø300mm x 1m Round Duct Silencer	No	12		
	Dance Studio 2, Air Distribution Ducting Network Comprifix Insulated Flanged Galvanised Steel Ducting as per SANS 1238:2002 E2				
219	600 x 500mm to Ø400mm – Transformer	No	6		
220	Ø400mm x Ø300mm to Ø300mm – 3 Way Junction	No	1		
221	Ø400mm Round Duct 90° Bend	No	1		
222	Ø350mm Round Duct 90° Bend	No	1		
223	Ø300mm Round Duct 90° Bend	No	1		
224	Ø250mm Round Duct 90° Bend	No	1		
225	Ø400mm Round Duct	m	8		
226	Ø300mm Round Duct	m	4		
227	2 350 x 350mm Filter Box with Washable Bag Filter (with 9 0350mm inlet and outlet)	Ν̈́ο	1		
228	Ø350mm Fire Smoke Damper	No	1		
229	250 x 250mm Filter Box with Washable Bag Filter (with Ø250mm inlet and outlet)	No	1		
230	Ø250mm Fire Smoke Damper	No	1		
231		No	1.		
	Section No. 5 Bill No. 2 Heating, Ventilation And Air–conditioning				
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Section No. 5
Bill No. 2
Heating, Ventilation And Air-conditioning

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ŀ		Unit	Quantity	Rate	Amount	
232	Hanging Duct Support Structure Material: Angle Iron with Hanging Rods Hooked onto Roof Structure	No	22			
233	Powder Coated Constant Volume Diffuser with Duct Adapter and Air Flow Balancing Damper Size: 600 x 600mm, Neck:					
	Ø300mm, Flow: 325L/s	No	2			
234	400 x 400mm Aluminium Louvered Return Air Grille	No	1	ì		ı
235	400 x 400mm to Ø350mm Neck – Transformer	No	1			
236	250x 250mm Aluminium Weather Louvered Wall Grille	No	1			
237	250x 250mm to Ø250mm Neck – Transformer	No	1			
238	Ø400mm x 1m Round Duct Silencer	No	1			
239	Ø300mm x 1m Round Duct Silencer	No	2			
	Central System			ļ		
240	Central System Outdoor Unit Cooling / Heating Capacity: 22.4 / 25.2 kW	No	1			
241	Office Bookshop Indoor Cassette Unit Cooling / Heating Capacity: 5.6 / 6.3 kW	No	1			
242	Audio and Video Indoor High Wall Unit Cooling / Heating Capacity: 2.8 / 3.2 kW	No	1			
243	Finance Office Indoor High Wall Unit Cooling / Heating					
243	Capacity: 2.8 / 3.2 kW	No	1			
244	Box Office Indoor High Wall Unit Cooling / Heating Capacity:					
	2.8 / 3.2 kW	No	1		<u> </u>	
245	Control High Wall Unit Cooling / Heating Capacity: 2.8 / 3.2 kW	No	1			
246	Mode Change Unit Type 1 (MCU-S4NEK3N)	No	1			
247	Mode Change Unit Type 2 (MCU-S6NEK2N)	No	1			
248	Wireless Remote Control	No	4			
249	Wired Remote Control	No	1			
	AC/Armaflex Insulated Hard drawn Refrigeration Copper Pipes			į		
250	Ø6.35mm	m	175			
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	Section No. 5 Bill No. 2					
	Heating, Ventilation And Air-conditioning					
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		Unit	Quantity	Kate	
251	Ø12.7mm	m.	275		
252	Ø15.88mm	m.	105		
253	Ø19.05mm	m	98		
254	Ø22.22mm	m	16		
255	Refnet Joint (MXJ-YA2512M)	No	1		
256	Refnet Joint (MXJ-YA2500M)	No	1		
257	100mm Wide Galvanised Steel Wire Cable Tray	m	98		
258	200mm Wide Galvanised Steel Wire Cable Tray	m	75		
259	WÜRTH R410a Refrigeration Gas	Kg	25		
	North Wing System				
260	North Wing Outdoor Unit Cooling / Heating Capacity: 72.8 / 81.9 kW	No	1		
261	Rehearsal 1 Indoor Hideaway Unit Cooling / Heating Capacity: 22.4 / 25.0 kW $$	No	1		
262	Rehearsal 2 Indoor Hideaway Unit Cooling / Heating Capacity: $9.0 / 10.0 \; \text{kW}$	No	1		
263	Green Room Indoor Cassette Unit Cooling / Heating Capacity: 5.6 / 6.3 kW	No	1		
264	Male and Female Change Room Indoor Cassette Unit Cooling / Heating Capacity: 5.6 / 6.3 kW	No	2		
265	Restaurant Cassette Unit Cooling / Heating Capacity: 5.6 / 6.3 kW	No	2		
	Training Room Indoor Cassette Unit Cooling / Heating Capacity: 5.6 / 6.3 kW	No	1		
267	Dressing Room Indoor High Wall Unit Cooling / Heating		_		
	Capacity: 2.8 / 3.2 kW	No	5		
2682 6 8		No	2		
2692 6		No	1		
5	70		, —	2 /b 4CH C201EV2NI\	
2702		Mode Ch	nange Unit Ty	ype 2 (MCU–S2NEK2N)	
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				LIMPOPO PROVINCIAL THEATS
		Unit	Quantity	Rate
271	Wired Remote Control	No	13	
	AC/Armaflex Insulated Hard drawn Refrigeration Copper Pipes			
	Ø6.35mm	m	155	
7 2				
	Ø9.52mm	m	19	
7 3				
2742	Ø12.7mm	m	192	
7 4				
2752	Ø15.88mm	m	83	
7 5				
	Ø19.05mm	m	105	
	Ø22.22mm	m	80	
	Ø28.58mm	m	144	
7 8	•			
	Ø34.92mm	m	80	
7 9	po 1102111111			
	Refnet Joint (MXJ-TA3419M)	No	1	
8	Reflect Joint (1970) - 183413101		_	
0	m 5 / NAVL MADA 000 A)	No	1	
2812 8	Refnet Joint (MXJ-YA3100M)	No	1	
1			_	
2822 8	Refnet Joint (MXJ–YA2512M)	No	2	
2				
283	Refnet Joint (MXJ-YA2500M)	No	2	
284	100mm Wide Galvanised Steel Wire Cable Tray	m	126	
285	200mm Wide Galvanised Steel Wire Cable Tray	m	89	
2862 8	WÜRTH R410a Refrigeration Gas	Kg	41	
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				Citoti		
1	Rehearsal 1 Air Distribution Ducting Network Comprifix Insulated Flanged Galvanised Steel Ducting as per SANS 1238:2002 E2				Amount	
2872	800 x 600mm to Ø600mm – Transformer	No	2			
8	, ,					
200	Ø550mm to Ø400mm x Ø300mm to Ø300mm – 4 Way					
288	Junction 4 way	No	1			
289	Ø400mm to Ø400mm x Ø300mm to Ø300mm – 4 Way					
203	Junction	No	1			
290	Ø550mm Round Duct 90° Bend	No	1			
291	Ø450mm Round Duct 90° Bend	No	1			
292	Ø300mm Round Duct 90° Bend	No	4			
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		Unit	Quantity	Rate
293	Ø550mm Round Duct	m	7	
294	Ø450mm Round Duct	m	4	
295	Ø400mm Round Duct	m	4	
2962 9	Ø300mm Round Duct	m	16	
29 7 2 9 7	Ø400mm Round Duct End Cap	No	1	
	450 x 450mm Filter Box with Washable Bag Filter (with Ø450mm inlet and outlet)	No	1	
299	Ø450mm Fire Smoke Damper	No	1	
300	300 x 300mm Filter Box with Washable Bag Filter (with \emptyset 300mm inlet and outlet)	No	1	
301	Ø300mm Fire Smoke Damper	No	2	
302	VAV Box (3 Way) Inlet 1: Ø450mm, Inlet 2: Ø300mm, Outlet: Ø550mm	No	2	
303	Hanging Duct Support Structure Material: Angle Iron with Hanging Rods Hooked onto Roof Structure	No	15	
304	Powder Coated Constant Volume Diffuser with Duct Adapter and Air Flow Balancing Damper Size: 600 x 600mm, Neck: Ø300mm, Flow: 225L/s	No	4	
305	500 x 500mm Aluminium Louvered Return Air Grille	No	1	
306	500 x 500mm to Ø450mm Neck – Transformer	No	1	
307	300 x 300mm Aluminium Weather Louvered Wall Grille	No	1	
308	300 x 300mm to Ø300mm Neck – Transformer	No	1.	
309	Ø550mm x 1m Round Duct Silencer	No	1	
310	Ø300mm x 1m Round Duct Silencer	No	4	
	Rehearsal 2, Air Distribution Ducting Network Comprifix Insulated Flanged Galvanised Steel Ducting as per SANS 1238:2002 E2	٠.		
311	600 x 500mm to Ø400mm – Transformer	No	6	
312	Ø400mm x Ø300mm to Ø300mm – 3 Way Junction	No	5 1	
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313	Ø400mm Round Duct 90° Bend	$\mathcal{T}_{ij} = \frac{g_{ij}}{g_{ij}} (\mathcal{F}_{ij}, \mathcal{F}_{ij}, g_{ij})$	No	1		Amount	
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		Unit	Quantity	Rate
314	Ø350mm Round Duct 90" Bend	No	1 :	
315	Ø300mm Round Duct 90° Bend	No	1	
316	Ø250mm Round Duct 90° Bend	No	1	
317	Ø400mm Round Duct	m	8	
318	Ø300mm Round Duct	m	4	
	350 x 350mm Filter Box with Washable Bag Filter (with \emptyset 350mm inlet and outlet)	No	1	
320	Ø350mm Fire Smoke Damper	No.	1	
321	250 x 250mm Filter Box with Washable Bag Filter (with \emptyset 250mm inlet and outlet)	No	1	
322	Ø250mm Fire Smoke Damper	No	1	
323	VAV Box (3 Way) – Inlet 1: Ø400mm, Inlet 2: Ø250mm, Outlet: Ø400mm	No	1	
324	Hanging Duct Support Structure Material: Angle Iron with Hanging Rods Hooked onto Roof Structure	No	22	
325	Powder Coated Constant Volume Diffuser with Duct Adapter and Air Flow Balancing Damper Size: 600 x 600mm, Neck: Ø300mm, Flow: 325L/s	No	2	
326	400 x 400mm Aluminium Louvered Return Air Grille	Νρ	1	
327	400 x 400mm to Ø350mm Neck – Transformer	No	1	
328	250x 250mm Aluminium Weather Louvered Wall Grille	No	1	
329	250x 250mm to Ø250mm Neck - Transformer	No	1	
330	Ø400mm x 1m Round Duct Silencer	Ņo	1	
331	Ø300mm x 1m Round Duct Silencer	No	2	
	Lobby 1 Female and Male Ablution Facilities			
332	600 x 600mm to Ø450mm − Transformer	No	2	
333	Ø250mm to Ø250mm x Ø150mm to Ø150mm – 4 Way Junction	No	2	
334	Ø350mm to Ø350mm x Ø200mm to Ø200mm – 4 Way Junction	No	2	

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		Unit	Quantity	Rate
335	Ø450mm to Ø350mm x Ø250mm to Ø250mm – 4 Way	•	2	
	Junction	No	2	
336	Ø200mm x Ø150mm to Ø150mm – 3 Way Junction	No	4	
337	Ø150mm x Ø250mm to Ø200mm – 3 Way Junction	No	2	
338	Ø150mm Round Duct 90° Bend	No	32	
339	Ø200mm Round Duct 90° Bend	No	4	
340	Ø350mm Round Duct 90° Bend	No	4	
341	Ø150mm Round Duct	m	54	
342	Ø200mm Round Duct	m	28	
343	Ø350mm Round Duct	m	4	
344	Ø450mm Round Duct	m	8	
3453	Ø250mm Round Duct End Cap	No	2	
4 5				
3463	Hanging Duct Support Structure Material: Angle Iron with			
4 6	Hanging Rods Hooked onto Roof Structure	No	36	
347	Powder Coated Constant Volume Discs with Duct Adapter			
347	and Air Flow Balancing Damper Size: Ø150mm, Neck:			
	Ø150mm, Flow: 125L/s	No	24	
3483 4	600 x 600mm Aluminium Weather Louvered Wall Grille	No	2	
8				
349	Ø450mm x 1m Round Duct Silencer	No	2	
350	Inline Extraction Fan Airflow: 1500L/s @ 450Pa	No	2	
	Lobby 2 Male and Female Ablution Facilities			
351	600 x 600mm to Ø450mm – Transformer	No	2	
352	Ø250mm to Ø250mm x Ø150mm to Ø150mm – 4 Way	NI -	2	
	Junction	No	2	
353	Ø350mm to Ø350mm x Ø200mm to Ø200mm – 4 Way Junction	No	2	
354	Ø450mm to Ø350mm x Ø250mm to Ø250mm – 4 Way			
334	Junction	No	2	
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355,	Ø200mm x Ø150mm to Ø150mm – 3 Way Junction	No	4	II	Amount	
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		Unit	Quantity	Rate
356	Ø150mm x Ø250mm to Ø200mm - 3 Way Junction	No	2	
357	Ø150mm Round Duct 90° Bend	No	32	
358	Ø200mm Round Duct 90° Bend	No	4	
359	Ø350mm Round Duct 90° Bend	No	4	
360	Ø150mm Round Duct	m	54	
361	Ø200mm Round Duct	m	28	
362	Ø350mm Round Duct	m	4	
363	Ø450mm Round Duct	m	8	
3643	Ø250mm Round Duct End Cap	No	2	
6 4				
	Hanging Duct Support Structure Material: Angle Iron with Hanging Rods Hooked onto Roof Structure	No	36	٠,
6	Powder Coated Constant Volume Discs with Duct Adapter and Air Flow Balancing Damper Size: Ø150mm, Neck: Ø150mm, Flow: 125L/s	No	24	
3673	600 x 600mm Aluminium Weather Louvered Wall Grille	No	2	
6				
368	Ø450mm x 1m Round Duct Silencer	No	2	
369	Upblast Extraction Fan Airflow: 1500L/s @ 450Pa	No	2	
309		•••		
370	Male and Female Ablution Facilities 600 x 600mm to Ø450mm – Transformer	No	2	
	Ø250mm to Ø250mm x Ø150mm to Ø150mm – 4 Way			
371	Junction Junction	No	2	
372	Ø350mm to Ø350mm x Ø200mm to Ø200mm – 4 Way Junction	No	2	
373	Ø450mm to Ø350mm x Ø250mm to Ø250mm – 4 Way			
	Junction	Νo	2	
374	Ø200mm x Ø150mm to Ø150mm – 3 Way Junction	No	4	
375	Ø150mm x Ø250mm to Ø200mm – 3 Way Junction	No	2	
376	Ø150mm Round Duct 90° Bend	No	32	
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1		Unit	Quantity	Rate	Amount
378	Ø350mm Round Duct 90° Bend	No	4		
379	Ø150mm Round Duct	m	54		
380	Ø200mm Round Duct	m	28		
381	Ø350mm Round Duct	m	4		
382	Ø450mm Round Duct	m	8		
3833	Ø250mm Round Duct End Cap	No	2		
3					
384	Hanging Duct Support Structure Material: Angle Iron with Hanging Rods Hooked onto Roof Structure	No	36		
385	Powder Coated Constant Volume Discs with Duct Adapter and Air Flow Balancing Damper Size: Ø150mm, Neck: Ø150mm, Flow: 125L/s	No	24		
3863	600 x 600mm Aluminium Weather Louvered Wall Grille	No	2		
8					
387	Ø450mm x 1m Round Duct Silencer	No	2		
388	Upblast Extraction Fan Airflow: 1500L/s @ 450Pa	No	2		
	Sundries, Testing, Commissioning and System Maintenance				
389	Programming of the Works. (All HVAC Works and Systems)	Lump Sum			
390	System Labelling (Per VRV System)	No	11		
391	Sub-Contractor's workshop drawings in Electronic Format (Revit, AutoCAD and PDF) (Per HVAC System)	No	11		
392	Diffuser Air Flow Balancing	No	144		
393	36 Month Warranty from Original Equipment Manufacturer (OEM) (Per VRV System)	No	11		
394	36 Month Warranty from Original Equipment Manufacturer (OEM) (Per Air Handling Unit)	No	4		
395	6 and 12 Month Post Commissioning Maintenance, including all equipment and sundries (Per VRV System)	No	22		
396	6 and 12 Month Post Commissioning Maintenance, including all equipment and sundries (Per Air Handling Unit)	No	8		
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1		Unit	Quantity	Rate	Amount	
397	Provision for Breakdown Maintenance including all equipment and sundries	Lump Sum				
3983	Manuals and Training Materials (Per HVAC System)	No	11			
8	•					
3993	As-Built Drawings in Electronic Native Format (Revit 2023, AutoCAD 2023 and PDF) (Per HVAC System)	No	11			
400	As-Built Drawings on A1 Colour Print (3 Sets Per HVAC System)	No	33			
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		Unit	Quantity	Rate	Amount
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	SECTION NO. 5				
	MECHANICAL INSTALLATION				
	BILL NO. 3 FIRE SYSTEMS				
	FIRE STOTEWIS				
	FIRE PROTECTIION				
	Manufacture (where required), supply, delivery, installation, commissioning and testing of all systems stated below. Rates to be inclusive any and all associated costs.				
	SPRINKLER INSTALLATION CONTROL VALVE ASSEMBLY		3		
	Each control valve described hereunder shall consist of but not limited to the following:				
	– Isolating Stop Valves				
	– A water motor alarm and gong				
	 Two pressure gauges located on either side of the alarm valve 				
	– 15mm test pipe – Ø50mm flushing connection	•			
	 Two Ø65mm instantaneous Fire Brigade booster connections 				
	- Non-return valve if required				
1	Ø160mm Sprinkler Control Valve assembly, including bypass arrangement, alarm gong, gauges, flow switch and required fittings and supports	No	2		
	Uninsuated Smoke Ventilation Galvanized Steel Ducting as per SANS 1238:2002		i		
	SPRINKLER SUPPLY MAINS - FROM ICV TO SPRINKLER ARRAY INCLUDING HANGERS, FITTINGS AND SUPPORTS				
	All sprinkler piping shall be medium grade black steel piping to SANS 62–1 or BS1387, and the rates supplied herein shall include all pipe hangers, supports, sockets, fittings nipples, flexible connections, and all necessary fittings along the running length. All piping will be applied with one coat of primer at the workshop prior to delivery to site and then followed by another touch up of the primer on delivery to site. All exposed piping shall be painted with two coats of signal red acrylic / gloss enamel paint.				
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	Fire Systems 259				
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		Unit Q	uantity _l	Rate	Amount
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V F	Threaded pipe fittings up to and including 150mm diameter will be malleable cast iron to SABS 509/1975 or BS 143/1952. Flanges up to and including 150mm diameter will be steel plate flanges to SABS 1123/1600/4 or BS 4505/16/4. Welded pipe fittings up to and including. 300mm diameter will be of steel butt-weld type to JIS B2304-72. Weld flanges between				
3	LOOmm and 300mm diameter will be steel plate flanges to SABS 1123/1600/3 or BS 4504/16/3. "Klambon" couplings can be used where deemed necessary. Rate to include Steel				
	Pipe Hangers fixed to roof structure	m	680		
2	Ø150 mm	""		·	
3	Ø32mm	m	790		
4	Ø25 mm	m	560		
	SPRINKLER HEADS				
_	Supply & installation of Ø15mm, 68°C, Chrome pendant				
	Quick Response K8, 5,0 mm/min density ceiling level	No	1 339		
	REMOTE TEST VALVES				
6	Allow for the installation of remote test valves in specified	.			
	areas.	No	6		
	SPARE PARTS				
		Sets	6		
7	Spare parts as listed in the ASIB specifications				
.	ASIB INSPECTIONS		_		
8	Allow for ASIB inspections	No	6		
	FIRE HYDRANTS				
			1		
9	Supply and install Right Angle Tamperproof Hydrant with 100mm Storz Outlet and 100mm Female BSP Inlet.				
	(Installation downstream of water meter connection).	No	2		
10	Supply and install Two-Port Booster with 65mm Brass Booster				
ļ	Connectors and a Pressure Gauge and 100mm T/16 Inlet encased in a steel cover with front open. Pressure gauge Dial				
	to read up to 2500kPa. (Installed downstream of Item Above).		_		
		No	2		
4.4	Internal Ø65 Instantaneous Fire hydrant complete	No	12		
11	Internal you instantance seems to				
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	Fire Systems				
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		Unit	Quantity	Rate	Amount	
12	Supply and install Two-Port Booster with 65mm Brass Booster Connectors and a Pressure Gauge and 100mm T/16 Inlet encased in a steel cover with front open. Pressure gauge Dial to read up to 2500kPa. (Installed downstream of Item Above).	No	2			
	FIRE HOSE REELS					
13	Supply and install 30 Metre Hose Reel in Metal Cabinet complete with 25mm Chromium plated. Shut-off valve, Aluminium Nozzle, Hose Guide and angle iron fixing bracket.	No	22			
	FIRE EXTINGUISERS					
14	4.5kg DCP on Chevron Board	No	44			
ļ	STATUTORY SIGNAGE					
15	Photoluminescent signage and warning notices in accordance with SANS 1186. Parts 1 & 5 incorporating the pictographs in the standard 190mm x 190mm module size encased in Aluminium metal frames with chamfered edges mechanically and securely fixed to walls or roof slabs. Strictly no double sided tape or silicone sealing of statutory signage is allowed.	No	224			
16	Allow for Iluminated Signage warning notices in accordance with SANS 1186. Parts 1 $\&$ 5	No	82			
	PIPING RETICULATION		ļ			
	All rates supplied in this bill of quantities will be deemed to include scaffolding to any height and fixing piping up to roof height. All piping rates supplied shall include couplings, bends, tees, sockets, pipe supports, anchors, along the running length and backfilling and compaction where pipes are laid in the ground.					
	All pipes suspended from concrete slabs, roof, ceiling, etc, shall be deemed to include in the rates all necessary hanger brackets, threaded rods (irrespective of the suspension length), nuts, washers, anchors and drilling of holes in the concrete slab.					
	All pipes are generally to be concealed inside ducts, ceiling voids except where it is necessary to feed an appliance and fixed with standard type pipe supports and brackets spaced at intervals strictly as per manufacturer's recommendations.					
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1		Unit	Quantity	Rate	Amount	1
	All above-ground firewater pipes (Galvanised Steel Pipework and Fittings), shall be Medium Grade Galvanised Steel to SANS 62 Part 1 for nominal sizes from 25mm up to and including 150mm above which pipes shall be Heavy Grade Galvanised Steel to SANS 719. All pipes and fittings shall be installed strictly in accordance with the manufacturer's specifications, and recommendations.					
	Pipes shall be colour coded in accordance with the requirements of SANS 10140 Identification Colour Marking – Part 3: 2017 Contents of Pipelines or similar approved in close consultation with the engineer.					
	Medium Grade Steel Pipes					
17	100mm diameter pipes	m	480			
18	80mm diameter pipes	m	382			
19	65mm diameter pipes	m	220			
20	50mm diameter pipes	m	380			
21	40mm diameter pipes	m	10			
22	32mm diameter pipes	m	306			
23	25mm diameter pipes	m	52			
	HDPE PN 16 pipes and fittings to SANS 966 Part 1: 2019 suitable for below-ground applications for the conveyance of potable water in reticulation systems in which continuous temperatures in excess of 25°C are not encountered					
24	Ø160mm High pressure pipe laid in ground not exceeding 1000mm deep.	m	1 280			
25	Ø110mm High pressure pipe laid in ground not exceeding 1000mm deep.	m	292			
26	Ø75mm High pressure pipe laid in ground not exceeding 1000mm deep.	m	80			
	FIRE PROTECTION PUMP					
	Manufacture, Supply, Deliver, Install, Test and Commission					
27	ASIB Approved Back-Up Fire Protection Pump Performace Parameters;					
	8Bar and 44L/s at outlet					
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ı		Unit	Quantity	Rate	Amount
	Comprising				
	2 x Diesel Driven Pump complete with engine and auto start control panel 2 x Electrical Driven Pump complete with auto start control panel				
	1 x Electrical Driven Jockey Pump complete with auto start control panel				
	2 x pressure switches				
	Set of 110mm Diameter flanged galvanised steel piping complete with isolating valves for water inlet				
	Set of 110mm Diameter flanged galvanised steel piping complete with isolating valves and pressure guages and pressure switches for water outlet				
	All pumps to be mounted on baseplates with damping mounts	Sets	2		
28	Provision for Containerized Pump House	Rate only	1		
		* .			
29	Provision for Hard and Soft Copy Shop Drawings for the Complete FireSystem	No	1		
30	Provision for Factory Acceptace Tests at Manufacturers Site	No	1		
31	Provision of COC for Pump Set	No	1		
	FIRE WATER STEEL TANK				
	Manufacture, Supply, Deliver, Install, Test and Commission				
32	Galvanized Steel Circular Steel Tank				
	Capacity: 313kL				
	Diameter: 10.78m				
	Height: 3.45m				
	80mm Inlet with gate valve				
	200mm outlet with gate valve				
	50mm overflow				
	Standard Access Ladder				
	Duct Cover/Verin Proof				
	Water Idicator Level		!		
	Concrete Ring Beam	No	2		
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ļ	Section No. 5				
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	Unit,	Quantity	Rate	Amount
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Provision for Base Footings and Structural Platform/Plinth				
Diameter: 14.00m				
Depth: 2m	!			
Concrete: 28m³ 40Mpa Concrete	N.	2		
Steel bar reinforcement: 0.5 tons	No	2		
SMOKE VENTILATION	l			
RVI Orion B15 louvred roof ventilators				
Compliance with EN12101-2: 2003				
92C Overriding Fusible Link				
24V-DC Fail Safe Motor				
Panel Size: 2050 High x 1600 Wide x 600 Deep				
Power: 230V @ 50Hz, 1 Phase @ 40Amps				
Single Zone IP55 B Spec Control Panel				
Rain Sensors with 25m of cable per unit.	No.	20	. *.	
35 RVI up Blast Extraction Fans	,			
Flowrate: 52L/s				
Pressure: -320Pa				
Compliance with EN12101-2: 2003				
24V-DC Fail Safe Motor				
Power: 400V @ 50Hz; 3 Phase @ 20Amps				
Single Zone IP6 Control Panel	No	2		
36 RVI Smoke Extraction Fans				
Flowrate: 210000L/s				
Pressure: -320Pa				
Compliance with EN12101-2: 2003			 	
24V-DC Fail Safe Motor				
Power: 400V @ 50Hz, 3 Phase @ 20Amps				
Single Zone IP6 Control Panel	No	4		
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Fire Systems			
	265	I	li i

		Unit	Quantity	Rate	Amount	1
		J, 111				
	SECTION NO. 5					
	MECHANICAL INSTALLATION					
	BILL NO. 4					
	KITCHEN EQUIPMENT					
	KITCHEN EQUIPMENT					
!	Manufacture (where required), supply, delivery, installation, commissioning and testing of all systems stated below. Rates to be inclusive any and all associated costs.					
	COOKING STATION					
1	Kitchen Ventilation System					
	Extraction Fan @ 30ACH - 368m/h @ 450Pa					
	Supply Fan @ 30ACH – 368m/h @ 200Pa					
	Dimensions: 4000 x 1150 x 600mm (LxWxH)					
	Material: 304 Stainless Steel with Brushed Finish				:	
	Complete with baffel filters, galvanised steel ducting, dampers, upblast fan and make up air fan	Rate only	1	·		
2	Ansul R–102 Kitchen Ventilation Automatic Fire Protection System					
	Single Tank					
	Dimensions: 521 mm x 597 mm x 191 mm					
	Automan Regulated Release Assembly (Mechanical)					
	Nitrogen Cartridge and/or Carbon Dioxide Cartridge					
	Ansul Low pH Liquid Fire Suppressant					
	Discharge Nozzeles					
	Detection Components	_				
	All required accessories to be included	Rate only	I.			
3	6 Burner Range					
	Dimensions: 900 x 803 x 1125mmH					
	Open Burners: 6					
	Gas Rating: Open Burner: 22800Btu/Hr					
	Carried to Collection			R		
	Section No. 5					
	Bill No. 4					
	Kitchen Equipment					
	266		1	I	Н	ı

		Unit	Quantity	Rate	Amount	
			į			
	Oven Burner: 28400Btu/Hr					
	Weight: 204Kg	Rate only	1			
		, 				
	Combie Steamer/Cooker					
4	LAINOX Combie Oven (Cooker/Steamer)		ļ			
	Capacity: 10 Pan for 300 meals		ı			
	DimensionsS : 875 x 825 x 820mm(H)					
	Power Consumption : 15.5 KW (Electric)	Rate	2	l		
		only				
		Rate	20			
5	Pan Inserts	only	20			
6	Perforated Inserts	Rate	20			
İ		only				
		Rate	20			
7	Wire Inserts	only	20			
8	Stand with Storage	Rate	2			
		only				
		Rate	50			
9	Cleaning Agent	only		 		
10	Grilled Frytop (Half Ribbed/Half Smooth)					
	Smooth & Half Ribbed frytop to right hand end only					
	Galvanised Shelf under					
	Dimensions :915x735x910mm 128kg					
	Power LP-Gas	Rate	1			
		only	<u>'</u>			
	The Day Base Smith					
	Two Pan Deep Fryer					
11						
	Dimensions : 508x600x1040mm 48kg					
	Carried to Collection			R		
	Section No. 5					
	Bill No. 4					
	Kitchen Equipment		!			
	267		1		li i	

- 1		Offic	Quantity	Nace	Amount	
		D-to-	1			
	Power LP-Gas	Rate only	1			
12	Fryer Baskets	Rate only	6			
13	Conical Filter Holder	Rate only	4			
14	Conical Paper Filter	Rate only	4			
	POTS AND DISHWASH STATION					
15	Double Bowel Pots Wash Sink with Spashback					
	304 Stainless Steel					
	Dimensions: 1850x650x900	Rate only	2			
16	Wall Mounted Stainless Steel Pots Rack	Rate only	2			!
	Dishwashing Station					
17	Hood Type Dishwashing Machine					
	Output: 40 Racks per Hour					:
	Dimensions: 624x740x1460mm (H)			!		
	Multipower 230V ~ 50Hz 2.2KW	Rate only	1			
18	Dishwasher outlet Table					
	Dimensions: 1150 x 620 x 900mm (H)	Rate only	I			
19	Bridging Sink with Splash Back (Right hand entry)					
	Dimensions: 1000x620mm (H)					
					ļ	
		•				<u> </u>
	Carried to Collection			R		
	Section No. 5					
	Bill No. 4 Kitchen Equipment					
	268					

		Un	it, Quantit	ty Rate		Amount	
	Bowl size : 500 x 450 x 250mm(D)	Rat on		1			
20	Dump Table with scrap hole						
	Shelf Basket						
	Dimensions: 1000x620mm (H)	Rat	1	1			
i		on	ly				
	PREPARATION AREA						
21	240kg/hr Potato Peeler						
21	-						
	Dimensions: 780 x 420 x 1450mm Power: 0.55Kw						
	High Grade Stainless Steel Drum	Rat or	1	1			
				!			
	Preparation Area Sink						1
22	Double Bowl Pots Wash Sink with Spashba Steel	ack 304 Stainless					
l	Dimensions: 1350x650x900mm(H)				!		
	Bowl Dimensions: 505x505x250mm(H)	Ra or	ie lly	1			
23	Tubular Undershelf 1300	Ra or		1			
24	15Lt Zip Hydroboil						
	Power Supply: 2,4kw 230v 1ph			·			
	Dimensions : 370x290x630mm(H)	Ra	I	1			
		O	nly				
	Down the Brown Tolla						
25	Preparation Area Table Preparation Table with Splashback						
25							
	304 Stainless Steel						
			İ		<u> </u>	<u> </u>	 _ _
		Carried to Collection			R		<u> </u>
	Section No. 5						
	Bill No. 4						
	Kitchen Equipment	269					
	1	303	•				

		Unit	Quantity _I	Rate	Amount
1		Jill	ocountally		
	Dimensions:1050 x 650 x 910mm(H)	Rate	2		
		only		İ	
		Rate	2		
26	Table Shelf – 304 Stainless Steel	only	-		
27	2 Tier Wall Mounted Shelving	Rate	2		
	$\mathcal{A}_{\mathcal{A}} = \{ (x,y) \in \mathcal{A}_{\mathcal{A}} : x \in \mathcal{A}_{\mathcal{A}} = \{ (x,y) \in \mathcal{A}_{\mathcal{A}} : x \in \mathcal{A}_{\mathcal{A}} = \{ (x,y) \in \mathcal{A}_{\mathcal{A}} $	only			
	Preparation Area Island Table				
28	Preparation Table	ļ			
	304 Stainless Steel	Rate	2		
	Dimensions:1050 x 650 x 910mm(H)	only			
29	Table Shelf – 304 Stainless Steel	Rate	2		
		only			
	Preparation Area Microwave Oven				
30	30L Microwave Oven	TRI N			
	St/Steel Interior and Exterior				
	Digital Display, 20 Programs				
	5 Power Levels, Ceramic Base				
	Power Consumption: 1600W			-	
	Exterior Dimensions: 542 x 329 x 461mm H	Doto		1	
	Power Source: 230v, 50Hz Single Phase	Rate only		1	
31	650x500mm, 304 Stainless Steel Wall Mounted Microwave				
5.	Oven Shelf	Rate		1	
	4 32 C C C	** * *	·		
	SERVING AREA				
37	IPPBX System Complete with	į			
	1 x Terminal with Touchscreen – Customer and Operator Side				
	The state of the s				R
	Carried to Collection				
	Section No. 5				
	Bill No. 4 Kitchen Equipment				
	270				<u> </u>

ļ	The second of th	Unit	Quantity	Rate	Amount	
		200				
	1 x POS Point Of Sale Software					
	1 x Scan 2000 Barcode Scanner					
	1. Drawer & Coin 4 Note		i			
	1 x Print 58mm Thermal Point Of Sale Printer		:			!
	1 x Bank Linked Card Reader (to be selected by client)	Rate only	1			
	av ekker ekkeriste			ė.		
33	Underbar Fridge		.]			
	304 Brushed Stainless Steel with 2 Doors					
-	Dimensions: 1180x750x900mm(H)					l
	Operating Temp: +2 to +6° C					
	Power Supply: 240V @ 10Amps	Rate only	1			
ļ	Bain Marie Server					
34	Bain Marie with Hot Cupboard	٠.				
	304 Stainless Steel with 5 Division					
	Dimensions: 1785 x 750 x 915mm high @ 252kg					
ļ	Electrics: 5,5KW, 380V, 2N	Rate only				
35	Full Sneeze Riser Guard Shelf	Rate	1	·		
		only	'			
36	Full Insert @ 150mm Deep Insert with Lid Cover	Rate only	1			
37	One Half Insert @ 150mm Deep Insert with Lid Cover	Rate only				
38	One Third Insert @ 150mm Deep Insert with Lid Cover	Rate only	- I			
	COFFEE BAR					
39	Micros (Oracle®) Point Of Sale System Terminal Connected to IPPBX System Complete with:					
	Carried to Collection			R		
	Section No. 5 Bill No. 4					
	Kitchen Equipment					
	271		. [

		Unit,	Quantity	Rate	Amount
	Contained Character Side				
	1 x Terminal with Touchscreen – Customer and Operator Side				
	1 x POS Point Of Sale Software				
	1 x Scan 2000 Barcode Scanner				
	1 x Drawer 8 Coin 4 Note 1 x Print 58mm Thermal Point Of Sale Printer				
	1 x Bank Linked Card Reader (to be selected by client)	Rate	1		
		only			
40	Underbar Fridge	-			
70	304 Brushed Stainless Steel with 3 Doors				
	Dimensions: 1780x750x900mm(H)				
	Operating Temp: +2 to +6° C				
ļ	Power Supply: 240V @ 10Amps	Rate	1		
	, от стану, и и и и и и и и и и и и и и и и и и и	only			
!					
41	Heated Salvador Display Unit				
	Capacity: 500lt with 3 Shelves		1 1		
	Dimensions: 1500 x 680 x 1200mm @ 300kg	Rate only	1		
42	Coffee Grinder/Doser-Super Jolly				
ļ	Capacity: 12.kg Coffee Bean Container				
	Capacity: 280g Ground Coffee Container Grinding Speed:				
	1400 rpm @ 50Hz	Rate only	1	ı	
		•	l·		
,	Espresso Semi-Automatic Coffee Machine				
43	Espresso Semi-Automatic Coffee Grinder/Doser-Super Jolly				
	Capacity: 12.kg Coffee Bean Container				
	Capacity: 280g Ground Coffee Container				
	Grinding Speed: 1400 rpm @ 50Hz	Rate only	, 1		
		Jiny			
44	Espresso Machine Cleaning Kit	Rate	5		
44	Espresso masima oreanny	only	'		
	Carried to Collection			1	R
	Section No. 5				
	Bill No. 4				
	Kitchen Equipment 272				
	212		1	1	

		Unit,	Quantity _I	Rate	Amount	
						l
						ı
45	Espresso Machine Knock Box	Rate only	2			•
		- · · · · · ·				
46	Coffee Tamper	Rate	2			
46	Conee ramper	only			ll .	
47	Ø385mm Mixing Bowl				l	
	304 Stainless Steel	Rate only	1 '			
		·				
	HAND WASH STATION					
48	304 Stainless Steel Hand Wash Station Complete with:				H	ı
46	1 x Knee Operated Sink (400x330x230mm(H))		•			
	1 x 500mL Soap Dispenser					
	1 x Paper Towel Dispenser	Rate	2			
	1x raper rower begans	only				
					ŀ	
	STORAGE AND REFRIGERATION.					
49	Vented 304 Stainless Steel Shelving @ 1070x460x1830mm (H)	Rate only		` 	1	
		·				
50	Vented 304 Stainless Steel Shelving @ 1220x460x1830mm (H)	Rate		L		
30	Ventua 30 / 300 mail	onl	/			
			ļ			
51		Rate		1		
	460x1830mm (H)	onl	1			ı
52	304 Stainless Steel Upright Freezer with Full Solid Doors					
	Capacity: 980Lt with 8 Shelves			ı		
	Power Supply: 600W, 220-240V @ 5 Amps					
	Dimensions: 1200x760x1950mm(H)	Rat on		1		
		Oit	''			
	304 Stainless Steel Upright Chiller with Full Solid Doors					
53			ı		ı	
	Capacity: 980Lt with 8 Shelves					
	Carried to Collection	ı			R	
	Section No. 5					
	Bill No. 4					
	Kitchen Equipment					
	307					

		Unit _I	Quantity	Rate	_{ll} Amount	ı
	Power Supply: 300W, 220–240V @ 5 Amps					
	Dimensions: 1200x760x1950mm(H)	Rate	2			
		only				
	CUNDENTS TESTING COMMUNICANIC AND OVERTERA					
	SUNDRIES, TESTING, COMMISSIONING AND SYSTEM MAINTENANCE					
54	Programming of the Works	Rate	1			1
	·	only				
55	Testing and Commission by Original Equipment Manufacturer					
75	(OEM)	Rate	4			
		only				
56	26 Month Warranty fram Original Faulton ant Manufacture					
סכ	36 Month Warranty from Original Equipment Manufacturer (OEM)	Rate	1			
		only	_			
57	06 Month Post Commissioning Maintenance, including all equipment and sundries	D-1-				
		Rate only	1			
58	12 Month Post Commissioning Maintenance, including all equipment and sundries					
	equipment and sundries	Rate only	1			
				}		
59	Equipment Labelling, Manuals and Training Materials	Rate	4			
		only				
60	As-Built Drawings in Electronic Native Format (Revit 2023,					
	AutoCAD 2023 and PDF)	Rate	2			
		only				
61	As-Built Drawings on A1 Colour Print	Rate	2			
		only				
	Annial Land			_		-
	Carried to Collection Section No. 5			R		
	Bill No. 4					
	Kitchen Equipment					
	274					

1			Amount	
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BILL NO. 4				
KITCHEN EQUIPMENT				
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	Carried To Section Summary	R		
Section No. 5	Carried To Section Summary	K		-
Bill No. 4				
Kitchen Equipment				

		Unit	Quantity	Rate	ll Amount
	SECTION NO. 5				
	MECHANICAL INSTALLATION				
	BILL NO. 5				
	ELEVATORS				
	ELEVATORS				
	Manufacture (where required), supply, delivery, installation, commissioning and testing of all systems stated below. Rates to be inclusive any and all associated costs				
	Elevator Details				
1	Type of Elevator: Gearless MRL				
	Capacity 1000kg / 13 Persons				
	Rated Speed 1000 mm/s				
	Travel 21000mm				
	Stops/Doors/Floors 7/7/7		ļ		
	Openings In Line		1		
	Basic station Ground	&I.o.	2		
	Floor marks: Basement, Ground, 1st, 2nd, 3rd, 4th, 5th Floors	No	2		
	Shaft Details				
2	Shaft dimensions (per Elevator): 2350(w) mm x 1900(d) mm				
	Headroom 4000mm				
	Pit 1600mm				
	Shaft material Concrete		1		
	Shaft lighting and electrical included	No	2		
	Internal Car Finishes				
3	Dimensions ID 1800 (w) mm x 2100 (d) mm x 2250 mm (h)			!	
	Front Panel Finish - Front Wall Hairline stainless steel				
	Rear Panel Finish - Rear Wall Hairline stainless steel				
	Side A Panel Finish – Side Wall A Hairline stainless steel				
	Side B Panel Finish – Side Wall B Hairline stainless steel				
	Ceiling From standard range				
	Flooring Black studded rubber			į	
	Handrail Round stainless steel on 3 sides				
		i· :	7		
	Carried to Collection				R
	Section No. 5				
	Bill No. 5				
	Elevators 276				

	and the second s	Unit	Quantity	Rate	Amount
	the control of the co				
	Skirting None				
	Mirror ½ on rear	į			
	Canvas Blanket Required	No	2		
	Car Internal Control Panel and Signalization				
4	COP Type Left front standing inside car facing out				
	Content Call buttons, alarm, door open, door close, emergency light, overload indicator, floor indicator			ç	
	COP Finish Hairline stainless steel				
	Display Type LCD				
	Display Content Numeric floor indicator, directional arrows				
	Display Colour Blue background and white text				
	Button Type Round				
	Button Backlight Colour Blue				
	Button with Braille With				
	Disabled COP Without				
İ	Voice Annunciator With				
	Arrival Gong on Car With	No	2		
	Landing Control Panel and Signalization				
5	LOP Type Surface mounted between Elevators				
	LOP Direction Signal Above Each Elevator	*. *			
	LOP Finish Hairline stainless steel				
	Display Type LCD				
İ	Display Content Numeric floor indicator, directional arrows				
	Display Colour Blue background and white text				
	Button Type Round				
	Button Backlight Colour Blue				
	Button with Braille With				
	Arrival Gong on Landing Without	No	14		
	Internal Car Door Details				
6	Door Opening Size 1100 (w) mm x 2100 (h) mm				
	Door Type 2 panel centre opening				
	Door Finish Hairline stainless steel				
	And the second				
	Carried to Collection			R	
	Section No. 5				
	Bill No. 5				
	Elevators				
1	277		1		

LIMPOPO PROVINCIAL THEATRE
Rate ... Amount

		Unit j	Quantity	Rate	Amount	
	Door Sill Finish Aluminium	No	2			
	Landing Doors		ļ			
7	Door Opening Size 1500 (w) mm x 2100 (h) mm					
	Door Type 2 panel centre opening					
!	Door Finish Hairline stainless steel	l				
	Door Sill Finish Aluminium		İ			
	Door Fire Rating 2 hour fire rated					
	Door Frame Type Standard small frame	,	1			
	Door Frame Finish Hairline stainless steel	No	14			
	Motor Drive Train System					
8	Drive Type Gearless traction machine					
	Power Required 400V					
	Drive Location Within shaft	No	2			
	Motor Drive Train Control System		<u> </u>			
9	Control Type Full collective					
	Inverter Type Integrated	-				
	Group Control Simplex					
	MAP Location Top floor next to landing door					
	MAP Finish Hairline stainless steel					
	Rescue Device With					
	Rescue Communication GSM device		ļ			
	Rescue Communication Connectable to Control Room					
	Communication System	No	2			
	Sundries, Testing, Commissioning and System Maintenance					
10	Programming of the Works	No		L		
11	Testing and Commission by Original Equipment Manufacturer					
	(OEM)	N	p 2	2		
12	36 Month Warranty from Original Equipment Manufacturer					
	(OEM)	N	0	2		
13	06 Month Post Commissioning Maintenance, including all					
	equipment and sundries	N	0	2		
					D	
	Carried to Collection				R	
	Section No. 5					
	Bill No. 5					
	Elevators 278					

1		Unit	Quantity	Rate	Amount	
14	12 Month Post Commissioning Maintenance, including all equipment and sundries	N 1 -	2	!		
	equipment and sundines	No	2			
15	Equipment Labelling, Manuals and Training Materials	Sets	4			
16	As-Built Drawings in Electronic Native Format (Revit 2023,					
	AutoCAD 2023 and PDF)	No	2			
17	As-Built Drawings on A1 Colour Print	No	2			
				,		
			i			
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						-
	Carried to Collection	on		R		
	Section No. 5					
	Bill No. 5					
	Elevators 279				į	

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		Amount	
·	<u> </u>		
BILL NO. 5			
BILL NO. 5			
ELEVATORS			!
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Elevators 280			
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) PROVINCIAL THE	CINE
	•	Unit Qua	antity	Rate	Amount	
				l l		
S	ECTION NO. 5			ļ		l
	MECHANICAL INSTALLATION			ļ		
, -	BILL NO. 6			ŀ		
	WET SERVICES					
1						
-	WATER SUPPLY					
	Manufacture (where required), supply, delivery, installation, commissioning and testing of all systems stated below. Rates to be inclusive any and all associated costs.					
	SITE WATER RETICULATION					
	HDPE PN 16 pipes and fittings to SANS 966 Part 1: 2019 suitable for below-ground applications for the conveyance of potable water in reticulation systems in which continuous temperatures in excess of 25°C are not encountered					
1	Ø110mm High pressure pipe laid in ground not exceeding 1000mm deep	m	688			
2	Ø110mm Gate Valve	,				
ļ	Installed in Valve Chamber not exceeding 1000mm below ground level					
	Pam CI Box with None-Remove Side Lid 3			ļ		
	00 x 400mm (C250 Hydrex)	No	4	ļ		
3	Ø90mm High pressure pipe laid in ground not exceeding 1000mm deep	m	126			
4	Ø90mm Gate Valve			.		
	Installed in Valve Chamber not exceeding 1000mm below ground level					
	Pam Cl Box with None-Remove Side Lid					
ļ	300 x 400mm (C250 Hydrex)	No	4			
	BUILDING WATER RETICULATION					
5	Ø32mm Diameter Galvanised Steel Waster Supply Piping	m	152			
6	Ø50mm Diameter Galvanised Steel Waster Supply Piping	mi	120			
7	and the Al Worter Supply Pining					
	Fittings	No	106			
	Carried to Collection			R		
	Section No. 5	÷	-			
	Bill No. 6					
	Wet Services 281					
	281		1			

ı		Unit	Quantity	Rate	Amount	
			:			
8	Ø80mm Diameter Galvanised Steel Waster Supply Piping		÷ . •			
	Fittings	No	84			
9	Ø25mm Diameter Galvanised Steel Waster Supply Piping	m	152			
10	Ø25mm Ball Valve	No	8			
11	Ø25mm Strainer	No	8			
12	Ø25mm Non– Return Valve	No	8			
13	Ø25mm Pressure Regulator	No	8			
14	Ø20mm Braided Flexibe Hose with Ball Valve	No	68			
15	Ø25mm Class 2 Copper Piping	m	189			
16	Ø20mm Class 2 Copper Piping	m	480			
17	Ø15mm Class 2 Copper Piping	m	320		i i	
18	Ø25mm Class 2 Copper Piping Capilary Fittings	No	170			
19	Ø20mm Class 2 Copper Piping Capilary Fittings	No	432			
20	Ø15mm Class 2 Copper Piping Capilary Fittings	No	288			
	BUILDING WATER DRAINAGE					
21	Ø32mm μPVC Piping (Class 34)	m	180			
22	Ø50mm μPVC Piping (Class 34)	m	280			
23	Ø110mm μPVC Piping (Class 34)	m	460		1	
24	Ø32mm μPVC Piping (Class 34) Fittings	No	216			
25	Ø50mm μPVC Piping (Class 34) Fittings	Νo	336			
26	Ø110mm μPVC Piping (Class 34) Fittings	No	1			
	GREASE TRAP	\$7,7				
27	304 Stainless Steel					
	Flow Rate: 71/s					
	Size: 2332 x 1002 x 1100 mm	NI-				
	1 Basket	No	1			ļ
	WATER HEATERS	1913				
28	Solar Water heater System 250L (Indirect)	:	4.3			
	Carried to Collection			R		
	Section No. 5	-1.	٠. ا			
	Bill No. 6	11	\$1.5g			
	Wet Services 282					

		Unit	Quantity	Rate	Amount
			•		
	Size: 2 x 1m x 0.5m Collectors	No	4		
	Storage: 250L		;	i	
29	200L 4.8kW EMS Domestic Integrated Heat Pump	ı		ı	
	Refrigeration: R410				
	Power Rating: 2.8 kW				
ļ	Electrical Power Supply: Ph / 220–240V / 50Hz	No	4	*	
ļ	STORAGE TANK				
30	Galvanized Steel Circular teel Tank			i	
	Capacity: 102kL		ļ		
İ	Diameter: 6.15m				
	Height: 3.45m				
	80mm Inlet with gate valve				
	110mm outlet with gate valve	•			
	50mm overflow	- 1			
	Standard Access Ladder				
	Duct Cover/Verin Proof				
	Water Idicator Level	No			
	Concrete Ring Beam	140			
31	Provision Sum for Base Footings and Structural Platform/Plinth				
	Diameter: 10m				
	Depth: 2m		0. O. O.		
•	Concrete: 20m³ 40Mpa Concrete	N			
	Steel bar reinforcement: 0.3 tons	N			
			ļ		
	Carried to Collection				R
	Section No. 5 Bill No. 6				
	Wet Services				
	283		I	1	

		·	Amount	
			,	
				٠
	BILL NO. 6			
	WET SERVICES			
	COLLECTION			
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	Carried To Section Summary	R		<u> </u>
	Section No. 5			
	Bill No. 6 Wet Services			
	Wet Services			

			Amount	
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	SECTION NO. 5			
	MECHANICAL INSTALLATION			
	SECTION SUMMARY			
Bill No.		Page		
1	PRELIMINARIES	236		
2	HEATING, VENTILATION AND AIR-CONDITIONING	258		
3	FIRE SYSTEMS	265		
4	KITCHEN EQUIPMENT	275		
5	ELEVATORS	280		
6	WET SERVICES	284		
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	Comind to Final Comment	R		
	Carried to Final Summary Section No. 5	K		
	SECTION SUMMARY			
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SECTION NO. 6 PROVISIONAL SUMS

		Unit	Quantity	Rate	Amount
	SECTION NO. 6				
	PROVISIONAL SUMS				
	BILL NO. 1				
	PROVISIONAL SUMS				
	DDEANADI EC				
	PREAMBLES The contractor is referred to the Model Preambles for Trades				
	(2008 Edition) as issued by the Association of South African Quantity Surveyors before pricing this bill				
	SUPPLEMENTARY PREAMBLES				
	General				
	Where stated, the contractor may allow for profit if required				
	PROVISIONAL SUMS FOR NOMINATED/SELECTED SUBCONTRACT WORKS				
	Specialist joinery work:				
1	Provide the sum of R1 000 000.00 (One Million Rand) for				
	design, supply and installation of joinery work by specialist subcontractor				
	Subcortu accoi	Item			1 000 000 00
2	Add for profit	Item			
. 3	Add for attendance in all trades	Item			
	Special ceilings:				
4	Provide the sum of R425 000.00 (Four Hundred and Twenty			[
i	Five Thousand Rand) for special ceilings	Item			425 000 00
5	Add for profit	Item			
6	Add for attendance in all trades	item			
	Signage				
7	Provide the sum of R760 000.00 (Seven Hundred and Sixty				
	Thousand Rand) for signage	ltem			760 000 00
8	Add for profit	Item			
9	Add for attendance in all trades	ltem			
	Wallnaner hanging				
10	Provide the sum of R125 000.00 (One Hundred and Twenty				
	Five Thousand Rand) for paperhanging	Item	1		125 000 00
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			Quantity	Rate	Amount	
		· / ·				
11	Add for profit	Item				
12	Add for attendance in all trades	ltem				
	External facades:					
13	Provide the sum of R7 500 000,00 (Seven Million and Five Hundred Thousand Rand) for architectural treatment of external facades	ltem			7 500 000 0	ın
14	Add for profit	ltem			7 333 333 3	•
15	Add for attendance in all trades	Item				
	Enterprise Development	100111				
16	Provide the sum of R300 000.00 (Three Hunddred Thousand					
	Rand) for enterprise development	Item			300 000 0	0
17	Add for profit	Item				
18	Add for attendance in all trades	Item				
i	Life Orientation Skills	140,1				
19	Provide the sum of R200 000.00 (Two Hundred Thousand Rand) for life orientation skills develpment	ltem			200 000 0	00
20	Add for profit	Item				
21	Add for attendance	ltem				
	Technical Skills					
22	Provide the sum of R300 000.00 (Three Hundred Thousand Rand) for technical skills development	ltem			300 000 0	10
23	Add for profit	Item				
24	Add for attendance	ltem				
	Reimbursement of Labourers During Training					
25	Provide the sum of R100 000.00 (One Hundred Thousand Rand) for reimbursement of labourers during training	tem			100 000 0	10
26	Add for profit	Item				
27	Add for attendance	Item				
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	Unit	Quantity	Rate	Amount
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Accommodation and Transport	3.5			
Provide the sum of R50 000.00 (Fifty Thousand Rand) for accommodation and transport of workers during training	ltem			50 000
Add for attendance	ltem			,
Add for profit	Item			
BUDGETARY ALLOWANCES				
Ironmongery			:	
Provide the sum of R1000 000,00 (One Million Rand) for				
ironmongery	Item			1 000 000
Gate house				
Provide the sum of R540 000,00 (Five Hundred and Forty Thousand Rand) for construction of gate house and boom				
gates	ltem			540 000
Scenery Lifting Machinery:			1	
Provide the sum of R500 000,00 (Five Hundred Thousand Rand) for fabrication and installation of scenery lifting		April April 1		
machinery	Item			500 000
Community Liasion Officer				
Provide the sum of R252 000.00 (Two Hundred and Fifty Two Thousand Rand) for appointmnet of CLO for thirty six months	ltem			252 000
Health and Safety Provisions:	12-17-11			
Provide the sum of R500 000.00 (Five Hundred Thousand Rand) for Health and Safety provisions				
raily for realth and safety provisions	Item			500 000
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Bill No. 1 Provisional Sums				
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		Unit	Quantity	Rate	Amount
	SECTION NO. 6				
	PROVISIONAL SUMS				
	BILL NO. 2				
	BUILDERS WORK I.C.W. SPECIALIST SUBCONTRACTORS				
	PREAMBLES				=
	The contractor is referred to the Model Preambles for Trades (2008 Edition) as issued by the Association of South African Quantity Surveyors before pricing this bill				
	BUILDER'S WORK IN CONNECTION WITH SPECIALIST INSTALLATIONS				
	Forming holes and openings:				
1	Form hole not exceeding 100mm diameter in half brick walls	No	80		
2	Form hole not exceeding 100mm diameter in one brick walls	No	50		
3	Form hole not exceeding 100mm diameter in 320mm brick				
	walls	No	30		
4	Form hole not exceeding 250mm diameter in half brick walls	No	30		
5	Form hole not exceeding 250mm diameter in one brick walls	No	30		
6	Form hole not exceeding 250mm diameter in 320mm brick				
	walls	No	20		
7	Form opening not exceeding 1m in girth in half brick walls	No	10		
8	Form opening not exceeding 1m in girth in one brick walls	No	5		
9	Form opening not exceeding 1m in girth in 320mm brick walls	No	4		
10	Form opening not exceeding 2m in girth in half brick walls	No	2		
11	Form opening not exceeding 2m in girth in one brick walls	No	2		
12	Form opening not exceeding 2m in girth in 320mm brick walls	No	2		
	Sleeves:				
13	1mm Thick galvanised mild steel sleeve for 250mm diameter				
	hole in one brick wall	No	20		
14	1mm Thick galvanised mild steel sleeve for 250mm diameter hole in 320mm brick wall	No	10		
	Carried to Collection			R	
	Section No. 6				
	Bill No. 2 Builders Work I.c.w. Specialist Subcontractors				
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		Unit	Quantity	Rate	Amount	
			i			
15	1mm Thick galvanised mild steel sleeve for hole not exceeding 1m in diameter through one brick wall	No	5			
16	1mm Thick galvanised mild steel sleeve for hole not exceeding 1m in diameter through 320mm brick wall	No	5			
	<u>MATS</u>					
	Entrance mats:					
17	Provide the sum of R220 000.00 (Two Hundred and Twenty Thousand Rand) for entrance mats and surrounds	Item				
	•					
	Carried to Collection	n		R		
	Section No. 6 Bill No. 2				:	
	Builders Work I.c.w. Specialist Subcontractors	!				
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BILL NO. 2		
BUILDERS WORK I.C.W. SPECIALIST SUBCONTRACTORS		
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	SECTION SUMMARY			
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SECTION NO. 7 CONTRACT PRICE ADJUSTMENT PROVISIONS

	Un	it	Quantity	Rate	Amount
1	SECTION NO. 7 CONTRACT PRICE ADJUSTMENT PROVISIONS BILL NO. 1 CPAP PROVISION CONTRACT PRICE ADJUSTMENT PROVISIONS Contract Price Adjustment Provisions Provide the sum of R18 334 000.00 (Eighteen Million, Three Hundred and Thirty Four Thousand Rand) for CPAP to be calculated and paid in accordance with the Haylett formula in accordance with Clause 31 of the JBCC contract document Item	iri)			18 334 000 00
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	Man of the second of the secon				
	Carried to Final Summary Section No. 7 Bill No. 1 Cpap Provision			R	
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		į "	Amount					
Section	FINAL SUMMARY							
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1	PRELIMINARIES	29						
2	BUILDINGS	141						
3	EXTERNAL WORKS	172						
4	ELECTRICAL INSTALLATION	231						
5	MECHANICAL INSTALLATION	285						
6	PROVISIONAL SUMS	294						
7	CONTRACT PRICE ADJUSTMENT PROVISIONS	296						
	ADD, CONTINCTNCIES							
	ADD: CONTINGENCIES							
	Allow the Amount of R7 500 000.00 (Seven Million Five Hundred Thousand Rands) for contingencies, to be used by the Principal Agent in terms of Clause of the Principal Building Agreement.	e 17	7 500 000 00					
	SubTotal excluding Value Added Tax							
	ADD VAT @ 15% 15%:							
	Carried to Tender	R						
	FINAL SUMMARY							
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