

Item No		Quantity	Rate	Amount
	<u>BILL NO. 1</u>			
	<u>PRELIMINARIES</u>			
	<u>NOTES</u>			
	1) The "General Conditions of Contract" as included in the "Standard Bidding documents for Procurement of Non-Consultant Services" shall be the form approved.			
	2) Bidders are referred to the abovementioned documents for the full intent and meaning of each clause thereof (hereinafter referred to by heading and clause number only) for which such allowance must be made as may be considered necessary.			
	3) Bidders are referred to Clause 41 for the method of adjustment of Preliminaries			
	<u>CONDITIONS OF BUILDING CONTRACT</u>			
	<u>GENERAL</u>			
A	Clause 1: Definitions			
	Fixed:.....			
	Time:.....			
	Value:.....	Item		
B	Clause 2: Interpretations			
	Fixed:.....			
	Time:.....			
	Value:.....	Item		
C	Clause 3: Language and Law			
	Fixed:.....			
	Time:.....			
	Value:.....	Item		
	Carried to Collection		ZK	
	Bill No. 1			
	PRELIMINARIES			

**BK1073 - Katete Forestry Phase 1a
Dormitory & Ablutions
Schedule of Quantities**

Item No		Quantity	Rate	Amount
D	Clause 4: Project manager's decisions Fixed:..... Time:..... Value:.....	Item		
E	Clause 5: Delegation Fixed:..... Time:..... Value:.....	Item		
F	Clause 6: Communications Fixed:..... Time:..... Value:.....	Item		
G	Clause 7: Sub-contracting Fixed:..... Time:..... Value:.....	Item		
H	Clause 8: Other contractors Fixed:..... Time:..... Value:.....	Item		
I	Clause 9: Personnel and Equipment Fixed:..... Time:..... Value:.....	Item		
J	Clause 10: Employer's and Contractor's Risks Fixed:..... Time:..... Value:.....	Item		
	Carried to Collection		ZK	
	Bill No. 1 PRELIMINARIES			

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Item No		Quantity	Rate	Amount
K	Clause 11: Employer's Risks Fixed:..... Time:..... Value:.....	Item		
L	Clause 12: Contractor's Risks Fixed:..... Time:..... Value:.....	Item		
M	Clause 13: Insurance Fixed:..... Time:..... Value:.....	Item		
N	Clause 14: Site Data Fixed:..... Time:..... Value:.....	Item		
O	Clause 15: Contractor to Construct the Works Fixed:..... Time:..... Value:.....	Item		
P	Clause 16: The Works to Be Completed by the Intended Completion Date Fixed:..... Time:..... Value:.....	Item		
Q	Clause 17: Approval by the Project Manager Fixed:..... Time:..... Value:.....	Item		
	Carried to Collection		ZK	
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Item No		Quantity	Rate	Amount
R	Clause 18: Safety Fixed:..... Time:..... Value:.....	Item		
S	Clause 19: Discoveries Fixed:..... Time:..... Value:.....	Item		
T	Clause 20: Possession of the Site Fixed:..... Time:..... Value:.....	Item		
U	Clause 21: Access to the Site Fixed:..... Time:..... Value:.....	Item		
V	Clause 22: Instructions Fixed:..... Time:..... Value:.....	Item		
W	Clause 23: Appointment of the Adjudicator Fixed:..... Time:..... Value:.....	Item		
X	Clause 24: Procedure for Disputes Fixed:..... Time:..... Value:.....	Item		
Carried to Collection			ZK	
Bill No. 1 PRELIMINARIES				

Item No		Quantity	Rate	Amount
	<u>TIME CONTROL</u>			
Y	Clause 25: Program Fixed:..... Time:..... Value:.....	Item		
Z	Clause 26: Extension of the Intended Completion Date Fixed:..... Time:..... Value:.....	Item		
AA	Clause 27: Acceleration Fixed:..... Time:..... Value:.....	Item		
AB	Clause 28: Delays Ordered by the Project Manager Fixed:..... Time:..... Value:.....	Item		
AC	Clause 29: Management Meetings Fixed:..... Time:..... Value:.....	Item		
AD	Clause 30: Early Warning Fixed:..... Time:..... Value:.....	Item		
	Carried to Collection		ZK	
	Bill No. 1 PRELIMINARIES			

Item No		Quantity	Rate	Amount
	<u>QUALITY CONTROL</u>			
AE	Clause 31: Identifying Defects			
	Fixed:.....			
	Time:.....			
	Value:.....	Item		
AF	Clause 32: Tests			
	Fixed:.....			
	Time:.....			
	Value:.....	Item		
AG	Clause 33: Correction of Defects			
	Fixed:.....			
	Time:.....			
	Value:.....	Item		
AH	Clause 34: Uncorrected Defects			
	Fixed:.....			
	Time:.....			
	Value:.....	Item		
	<u>COST CONTROL</u>			
AI	Clause 35: Contract Price			
	Fixed:.....			
	Time:.....			
	Value:.....	Item		
AJ	Clause 36: Changes in the Contract Price			
	Fixed:.....			
	Time:.....			
	Value:.....	Item		
	Carried to Collection		ZK	
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Item No		Quantity	Rate	Amount
AK	Clause 37: Variations Fixed:..... Time:..... Value:.....	Item		
AL	Clause 38: Cash Flow Forecasts Fixed:..... Time:..... Value:.....	Item		
AM	Clause 39: Payment Certificates Fixed:..... Time:..... Value:.....	Item		
AN	Clause 40: Payments Fixed:..... Time:..... Value:.....	Item		
AO	Clause 41: Compensation Events Notwithstanding the provisions of this clause, the preliminaries shall be adjusted on the basis of fixed, time and value related items. Fixed:..... Time:..... Value:.....	Item		
AP	Clause 42: Tax Fixed:..... Time:..... Value:.....	Item		
	Carried to Collection		ZK	
	Bill No. 1 PRELIMINARIES			

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Item No		Quantity	Rate	Amount
AQ	Clause 43: Currencies Fixed:..... Time:..... Value:.....	Item		
AR	Clause 44: Price Adjustment Fixed:..... Time:..... Value:.....	Item		
AS	Clause 45: Retention Fixed:..... Time:..... Value:.....	Item		
AT	Clause 46: Liquidated Damages Fixed:..... Time:..... Value:.....	Item		
AU	Clause 47: Bonus Fixed:..... Time:..... Value:.....	Item		
AV	Clause 48: Advance Payment Fixed:..... Time:..... Value:.....	Item		
AW	Clause 49: Securities Fixed:..... Time:..... Value:.....	Item		
Carried to Collection			ZK	
Bill No. 1 PRELIMINARIES				

Item No		Quantity	Rate	Amount
AX	Clause 50: Dayworks Fixed:..... Time:..... Value:.....	Item		
AY	Clause 51: Cost of Repairs Fixed:..... Time:..... Value:.....	Item		
AZ	Clause 52: Labour Clause Fixed:..... Time:..... Value:.....	Item		
<u>FINISHING THE CONTRACT</u>				
BA	Clause 53: Completion Fixed:..... Time:..... Value:.....	Item		
BB	Clause 54: Taking Over Fixed:..... Time:..... Value:.....	Item		
BC	Clause 55: Final Account Fixed:..... Time:..... Value:.....	Item		
BD	Clause 56: Operating and Maintenance Manuals Fixed:..... Time:..... Value:.....	Item		
Carried to Collection			ZK	
Bill No. 1 PRELIMINARIES				

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Item No		Quantity	Rate	Amount
BE	Clause 57: Termination Fixed:..... Time:..... Value:.....	Item		
BF	Clause 58: Fraud and Corruption Fixed:..... Time:..... Value:.....	Item		
BG	Clause 59: Payment upon Termination Fixed:..... Time:..... Value:.....	Item		
BH	Clause 60: Property Fixed:..... Time:..... Value:.....	Item		
BI	Clause 61: Release from Performance Fixed:..... Time:..... Value:.....	Item		
BJ	Clause 61: Release from Performance Fixed:..... Time:..... Value:.....	Item		
Carried to Collection			ZK	
Bill No. 1 PRELIMINARIES				

Item No	<u>SPECIFIC PRELIMINARIES</u>	Quantity	Rate	Amount
BK	<p><u>Old materials and components from demolitions and alterations</u></p> <p>Old materials and components from demolitions and alterations required to be set aside for refixing or those handed over to the Employer must be carefully removed and shall be temporarily stored and descriptions shall be deemed to included for this and for delivering to the regional office of the Department of Works against signature.</p> <p>All other materials from the demolitions and alterations which may be utilised by the Employer on any other site shall also become the property of the Employer, must be carefully removed and shall be temporarily stored and descriptions shall be deemed to include for this and for delivering to the applicable Ministry against signature. Should the Contractor be unsure of whether the Employer in fact wishes to retain such material, the Contractor shall make enquiries in this regard to the Employer or Architect.</p> <p>All other materials not to be utilised by the Employer will become the property of the Contractor and as such credit must be allowed for on the summary and the materials becoming the property of the Contractor must be removed and the site left neat and clean</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
	Carried to Collection		ZK	
Bill No. 1 PRELIMINARIES				

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Item No		Quantity	Rate	Amount
BL	<p>Samples of materials</p> <p>The contractor shall furnish at his own cost such samples of materials and specimens of colours as may be called for by the Project Manager for his approval.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
BM	<p>Samples of workmanship and mockups</p> <p>The contractor shall furnish such samples of workmanship as may be called for by the Project Manager for his approval. Where an assembly of various elements of the buildings is required, which is not incorporated in the works, this shall be arranged by the contractor. Any cost involved shall be borne by the employer.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
BN	<p>Ordering of materials</p> <p>Should the Bills of Quantities be used for ordering materials, this shall be entirely at the contractor's risk.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
Carried to Collection			ZK	
Bill No. 1 PRELIMINARIES				

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Item No		Quantity	Rate	Amount
BO	<p>Enclosure of works</p> <p>The contractor shall provide, erect, alter as necessary, maintain and remove and make good at completion suitable hoardings complete with gentries, fans, safety screens, barriers, access gates, covered gangways, steel sections at crane lifts, splayed corners, returned ends, etc. all as necessary for the enclosure of the works and the protection of the general public and others.</p> <p>The contractor shall pay and recover all deposits and pay all fees and charges in connection with the hoarding and the use of the pavements throughout the whole course of the contract, all in accordance with any Act of Parliament, regulation or by-law of any local authority.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
BP	<p>Pavement crossings and parking meters</p> <p>The contractor shall pay and recover all deposits and pay all fees and charges in connections with and/or obtain permission for the suspension of parking facilities and for pavement or street encroachment and or crossings and the removal and eventual reinstatement of any local authority's parking meters</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
Carried to Collection			ZK	
Bill No. 1 PRELIMINARIES				

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Item No		Quantity	Rate	Amount
BQ	<p>Special scaffolding</p> <p>No special scaffolding is measured as these Bills of Quantities are based on the sixth edition of the Standard System for Measuring Building Work.</p> <p>The Contractor shall provide, maintain and remove on completion special scaffolding for areas exceeding 5m above floor level, for use of all trades, as defined under the "Description of the Works".</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
BR	<p>Contractor's offices and sheds</p> <p>The contractor shall provide and maintain temporary sheds and offices for the proper storage of materials and for the use of the workmen and shall remove such temporary sheds and offices on completion.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
BS	<p>Offices</p> <p>The contractor shall provide, maintain and remove on completion office accommodation for meetings held on site. The office shall be provided with tables and chairs sufficient for the maximum number of persons attending meetings and shall be kept clean.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
Carried to Collection			ZK	
Bill No. 1 PRELIMINARIES				

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Item No		Quantity	Rate	Amount
BT	<p>Main notice board</p> <p>The contractor shall provide, erect where directed, maintain and remove on completion the main noticeboard complying with the requirements of the Institute of Namibian Architects, with the title of the project and the names of the employer, the architect, the quantity surveyor, the consulting engineers and the contractor signwritten thereon.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
BU	<p>Water</p> <p>The contractor shall provide all water for the works, including all necessary temporary plumbing, removing same and making good on completion.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
BV	<p>Electricity and lighting</p> <p>The contractor shall provide all necessary electricity and artificial lighting for the works, including all necessary temporary installation work, removing same and making good on completion.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
Carried to Collection			ZK	
Bill No. 1 PRELIMINARIES				

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Item No		Quantity	Rate	Amount
BW	<p>Telephones</p> <p>The contractor shall provide, maintain and remove on completion a PT telephone on site for use by all persons engaged upon the works and shall be entitled to recover the cost of outgoing calls from those making them.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
BX	<p>Toilets</p> <p>The contractor shall provide, maintain in a thoroughly clean and tidy condition proper toilets for the use of the workmen and remove same on completion.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
	Carried to Collection			ZK
	Bill No. 1 PRELIMINARIES			

Item No		Quantity	Rate	Amount
BY	<p>Payment of preliminaries</p> <p>The amount to be included in each monthly certificate in respect of preliminaries costs shall be calculated from the priced items within the preliminaries section of the bills of quantities.</p> <p>The contractor and project manager shall agree a division of the priced preliminaries items into:</p> <p>1) an initial or establishment charge, payment of which shall be made to the contractor on proof that the relevant expenditures have been made; 2) a monthly charge, and 3) a final or dis-establishment charge</p> <p>Should the contractor and project manager be unable to agree such division then the project manager shall make a fair and reasonable division.</p> <p>In arriving at such division cognisance shall be taken of such factors as:</p> <p>1) Premiums for policies of insurance and performance guarantees being renewable annually, 2) Plant, scaffolding and the like remaining the property of the contractor or the hiring company and the capital cost thereof not being treated as part of the initial charge.</p> <p>In the event of an extension of time for the completion of the works the monthly charge be recalculated on the same basis as originally but taking into account the revised contract period and the amounts already paid to the contractor.</p> <p>Fixed:..... Time:..... Value:.....</p>			
	Carried to Collection			ZK
	Bill No. 1 PRELIMINARIES			

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Item No		Quantity	Rate	Amount
BZ	<p>Protection</p> <p>The contractor shall provide for the protection of all work for which a certificate of practical completion has not been issued and which is liable to be damaged from any cause. The contractor shall be responsible for any damage which may occur and shall make good at his own expense.</p> <p>Fixed:..... Time:..... Value:.....</p>			
		Item		
CA	<p>Protection of existing and/or partially occupied works</p> <p>The contractor shall provide all reasonable measures necessary to protect the existing and/or partially occupied works to ensure that they are not damaged and he shall remove such protection on completion.</p> <p>Fixed:..... Time:..... Value:.....</p>			
		Item		
CB	<p>Site security</p> <p>The contractor shall provide all watching and lighting necessary for general site security.</p> <p>Fixed:..... Time:..... Value:.....</p>			
		Item		
	Carried to Collection			
			ZK	

Bill No. 1
PRELIMINARIES

Item No		Quantity	Rate	Amount
CC	<p>Notice before covering work</p> <p>The contractor shall give adequate notice to the project manager whenever any work or materials which are subjected to the project manager's inspection or remeasurement are to be covered in or concealed in any way. In default of such notice being received such work or materials shall be uncovered and later made good at the contractor's expense.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
CD	<p>Disturbance</p> <p>The contractor shall execute the whole of the works with a minimum of disturbance to the adjoining premises, any parts of the works already handed over and the occupants of those premises and/or parts.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
CE	<p>Clearing and cleaning</p> <p>The contractor shall regularly clean and clear away all rubbish and excess materials as the works proceed and, on completion, leave the works in a clean and satisfactory state for immediate use and occupation.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
Carried to Collection			ZK	
Bill No. 1 PRELIMINARIES				

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Item No		Quantity	Rate	Amount
CF	<p>Vermin</p> <p>The contractor shall take all necessary precautions to keep the works and site free from vermin during construction and shall leave the works vermin free on completion.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
CG	<p>Workers' Compensation Insurance.</p> <p>The Contractor and domestic sub-contractors shall insure workmen in terms of the Workers' Compensation Act (As amended by Act No. 27 of 1994) and shall deposit immediately with the Project Manager written confirmation of evidence of registration under the Workmen's Compensation Act when signing the Contract.</p> <p>Persons not falling under the above mentioned Act must be insured under individual Personal Accident Insurance policies to the satisfaction of the Project Manager.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
CH	<p>Open Fires.</p> <p>No open fires will be permitted except in such places as are approved by the Principal Agent. Any workmen or labourers lighting fires in unauthorised places are to be immediately dismissed.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
Carried to Collection			ZK	
Bill No. 1 PRELIMINARIES				

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Item No		Quantity	Rate	Amount
CI	<p>Blasting</p> <p>The Contractor shall take all responsibility during blasting operations, should any be necessary, and must observe all conditions set forth in Government and Local Authority Regulations. The use of explosives is left to the discretion of the Contractor who must indemnify the Employer against any claims for damages to persons or property on or near the site from any cause whatsoever arising out of the use of explosives. The Contractor will be held solely responsible for and must immediately make good, at his own expense, any damage that may occur through the use of explosives.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
CJ	<p>As built drawings</p> <p>The position of construction breaks and the extent of individual concrete pours are to be recorded by the contractor on the structural engineer's drawings and are to be submitted to the architect and the structural engineer for their records.</p> <p>The contractor shall furnish the Project Manager with a set of marked drawings indicating the positions of all plumbing and drainage pipe work as actually built.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
Carried to Collection			ZK	
Bill No. 1 PRELIMINARIES				

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Item No		Quantity	Rate	Amount
CK	<p>Protection of trees</p> <p>Only those trees as are indicated by the Project Manager shall be removed. All other trees are to be protected during the building operations and no workmen may damage these trees in any way. The Contractor is to note that some trees may occur within the area of building operations. Before removing such trees, the Contractor is to obtain specific instructions from the Project Manager as whether such trees may be removed or not.</p> <p>Fixed:..... Time:..... Value:.....</p>	Item		
	Carried to Collection		ZK	
	Bill No. 1 PRELIMINARIES			

Bill No. 1

PRELIMINARIES

COLLECTION

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Carried to Summary

ZK

Bill No. 1
 PRELIMINARIES

Item No	Unit	Quantity	Rate	Amount
<p><u>BILL NO 2</u></p>				
<p><u>ALTERATIONS AND ADDITIONS</u></p>				
<p><u>SUPPLEMENTARY PREAMBLES</u></p>				
<p><u>General</u></p>				
<p>The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent</p>				
<p>Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the principal agent</p>				
<p>Doors, fanlights, fittings, frames, linings, etc which are to be re-used shall be thoroughly overhauled before refixing including taking off, easing and re-hanging, cramping up, re-welding as required and making good cramps, dowels, etc, and easing, oiling, adjusting and repairing ironmongery as necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber, unless otherwise described. Re-painting or re-varnishing is given separately</p>				
<p>Prices for taking out of doors, windows, etc shall include for removal of all beads, architraves, ironmongery, etc</p>				
<p>Carried to Collection</p>			<p>ZK</p>	
<p>Bill No. 2 ALTERATIONS</p>				

Item No		Unit	Quantity	Rate	Amount
	<p>Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc and making good floor and wall finishes to match existing</p> <p>With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, tops of walls, etc, shall be levelled and prepared for raising of brickwork</p> <p>Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary</p> <p>The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc)</p> <p>Note : All interior work is to be executed inside the existing building</p> <p><u>ALTERATIONS AND DEMOLITIONS</u></p> <p><u>Concrete, etc</u></p>				
A	Wash down existing grano floors with approved sugar soap and water solution and leave free from dirt, polish, fat, etc.	m2			
B	Prepare existing concrete surface bed to receive new ceramic floor tiles (Tiles elsewhere measured)	m2	232		
C	Prepare existing surface of concrete surface bed for raising new 110mm brick wall (wall elsewhere measured)	m	75		
D	Carefully hack up and remove concrete rainwater channel approximately 750mm wide x 200mm thick, with half round channel formed therein	m	80		
	Carried to Collection				ZK
	Bill No. 2 ALTERATIONS				

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Item No		Unit	Quantity	Rate	Amount
E	12mm Diameter x 500mm long Y12 bar fixed 150mm deep in and including mortice in existing concrete foundation, and other end cast in new foundation (concrete elsewhere)	No	10		
	<u>Brickwork, etc</u>				
F	Carefully break down and remove not exceeding 200mm thick concrete block wall	m2	104		
G	10mm Thick x 110mm wide Jointex or other similar and approved sealer between new and existing walls	m	16		
H	1,2mm Thick x 30mm wide x 800mm long galvanised hoop iron tie, pinned to brick wall with 3mm diameter x 30mm long drive pin, and bent to 90 degrees	No	66		
	<u>Form opening in existing not exceeding 200mm thick concrete block or brick wall to receive timber frame for aluminium window or door (frame and window/door elsewhere measured) and make good plastered finishes all round</u>				
I	Opening size 826mm wide x 1800mm high	No	6		
	<u>Form opening in existing not exceeding 200mm thick concrete block or brick wall to receive timber frame for aluminium window or door (frame and window/door elsewhere measured) and make good plastered finishes all round, including supply and installation of flat precast concrete lintel over the opening</u>				
J	Opening size 600mm wide x 200mm high (DWS-04)	No	1		
	Carried to Collection			ZK	
	Bill No. 2 ALTERATIONS				


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Item No		Unit	Quantity	Rate	Amount
K	Opening size 600mm wide x 400mm high (DWS-03)	No	1		
L	Opening size 600mm wide x 600mm high (DWS-02)	No	18		
M	Opening size 877mm wide x 2064mm high DS-02, DS-02)	No	4		
N	Opening size 1022mm wide x 805mm high (KWS-01)	No			
O	Opening size 1022mm wide x 500mm high (SNV-03)	No			
P	Opening size 1022mm wide x 1086mm high (KWS-02)	No			
Q	Opening size 1100mm wide x 1554mm high (KWS-02)	No			
R	Opening size 1500mm wide x 2064mm high (KDS-01)	No			
S	Opening size 1800mm wide x 2064mm high (DS-01)	No	14		
T	Opening size 3000mm wide x 604mm high (DWS-01)	No	2		
	<u>Carefully take out existing steel window from block wall and hand over to Client</u>				
U	Glazed steel window not exceeding 2,5 m ²	No	20		
	Carried to Collection			ZK	
	Bill No. 2 ALTERATIONS				

Item No		Unit	Quantity	Rate	Amount
	<u>Taking out and removing doors, windows, etc, including thresholds, sills, etc from walls NOT to be demolished</u>				
V	Carefully take out and remove timber hatch size 2,5m wide x 1m high and prepare opening to receive brickwork	No			
	<u>Carefully take out existing timber door including steel door frame from block wall and hand over to Client</u>				
W	Timber door in and including steel frame exceeding 1m2 and not exceeding 2m2 and make good finishes all round, and hand over to Client	No	23		
	<u>Roof coverings etc</u>				
X	Carefully examine corrugated iron roof covering including valleys, hips, ridge and flashings, repair all leaks and replace all damaged sheets, roofing screws and washers, flashings and cappings as necessary with new materials	m2			
	<u>Carpentry & Joinery</u>				
Y	Take out and remove existing timber door size approximately 813 x 2032mm from steel frame and hand over to Client	No			
	<u>Ceilings, etc</u>				
Z	Take down and remove gypsum plasterboard ceiling covering, brandering and cornices	m2	198		
	Carried to Collection			ZK	
	Bill No. 2 ALTERATIONS				

Item No		Unit	Quantity	Rate	Amount
	<u>Metalwork</u>				
AA	Carefully remove existing steel door sixe 1,04m wide x 1,96m high from existing steel door frame, cut off existing locking mechanism, weld four approximately 1,2m long 25 x 100 x 3mm thick rectangular hollow-section supports onto existing steel door, and prepare for paint (paint elsewhere) before re-installing in same position	No			
	<u>Plastering, etc</u>				
AB	Carefully remove screed and prepare concrete surface bed to receive new screed	m2	238		
AC	Hack off and remove internal plaster to walls and prepare block walls to receive new plaster	m2	544		
AD	Hack off and remove external plaster to walls and prepare block walls to receive new plaster	m2	244		
	<u>Plumbing and Drainage</u>				
AE	Excavate for and remove existing not exceeding 160mm diameter uPVC sewer pipe not exceeding 1m deep, including backfill and ramming after new pipe installation (new pipes elsewhere measured)	m			
AF	Ditto, exceeding 1m and not exceeding 2m deep	m	39		
AG	Ditto, exceeding 2m and not exceeding 3m deep	m	91		
AH	Ditto, exceeding 3m and not exceeding 4m deep	m	6		
AI	Carefully cut off existing 50mm diameter HDPE or uPVC pipe and form connection to new uPVC pipe (elsewhere measured), fixing to existing steel construction and leaving completely watertight	No	1		
	Carried to Collection			ZK	
	Bill No. 2 ALTERATIONS				

Item No		Unit	Quantity	Rate	Amount
	<u>Disconnect, take down and remove the following sanitary fittings, including taps, mixers, angle valves, traps, cisterns, etc including cutting off water supply and soil and waste piping 50 mm deep below wall or floor surface, disinfecting and stopping off same and making good wall and floor finishings, and hand over sanitary fittings, taps and traps to Client</u>				
AJ	Hand wash basin complete	No	9		
AK	Washtrough complete	No	2		
AL	Shower consisting of rose, pipe work, taps and trap	No	10		
AM	WC Suite including cistern ,etc.	No	8		
AN	Urinal	No	6		
	<u>Renovations to existing water tower</u>				
AO	300 x 65 x 20 x 3mm Thick cold formed lipped channel (10,5kg/m) in 3m lengths, each twice bolted to existing 4mm thick steel structure with 10mm diameter bolts with head, nut and washers, all approximately 6m above ground level	kg			
AP	Provide additional welding to existing tank stand not exceeding 6m high at various points in short lengths (to be remeasured later) with approved welding rods, including cleaning before and after welding	m			
AQ	Carefully take down existing 5000 litre uPVC water tank from tower approximately 6m above ground level, temporarily store and install in same position	No			
	Carried to Collection			ZK	
	Bill No. 2 ALTERATIONS				

Item No		Unit	Quantity	Rate	Amount
AR	Supply and install 8mm diameter stainless steel cable not exceeding 4m long, with one end looped around existing water tank hold-down point and other end secured to tank stand, both ends fixed with and including wire grip as shown below or other approved method 	No			
AS	Carefully remove by loosening or grinding existing bolt, and replace with new 16mm diameter x not exceeding 90mm long bolt with head, nut and two washers (provisional) Glazing	No			
AT	Carefully remove existing 4mm thick glazing from steel window in panes not exceeding 0,1m ² including all putty, etc. and prepare to receive new glazing (new glazing elsewhere measured)	m2	2		
Carried to Collection					ZK
Bill No. 2 ALTERATIONS					

Bill No. 2

ALTERATIONS

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Bill No. 2
 ALTERATIONS

Item No		Quantity	Rate	Amount
	<u>BILL NO 3</u>			
	<u>EARTHWORKS</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Nature of ground</u>			
	The nature of the ground is assumed to be very loose sandy condition.			
	Carried to Collection		ZK	
	Bill No. 3 EARTHWORKS			

Item No	Quantity	Rate	Amount
<p><u>Classification of excavated material</u></p> <p>“Hard rock” shall mean granite, quartzitic sandstone or other rock of similar hardness, the removal of which requires drilling, wedging and splitting or the use of explosives. <u>Should the Contractor be of the opinion that the excavation is in material that should be classified as “hard rock”, he shall notify the Principal Agent immediately in order that an inspection and a decision may be made under which category such excavation falls. Failure of the Contractor to give such notification, the excavation shall be deemed to be in “earth” and shall be valued accordingly.</u></p> <p>“Soft rock” shall mean hard material the removal of which warrants the use of pneumatic tools and includes hard shale, ferricite, compact outcrop and material of similar hardness. “Earth” shall mean all ground other than that classified as “hard rock” or “soft rock” and shall include made-up ground and any loose stones or pieces of concrete not exceeding 0,03 m³ in volume. <u>Additional to this, “earth” shall mean material which can be excavated by a backhoe excavator working on a level plane with engine, complete with a two-piece boom, medium stick and 910mm wide bucket, with a stick crowd force of not less than 10 metric tones, and with operating mass of not less than 23 metric tones. The Caterpillar excavator model 225 falls into this category.</u></p> <p><u>Subterranean water</u></p> <p>No subterranean water is expected</p>			
<p>Carried to Collection</p>		<p>ZK</p>	
<p>Bill No. 3 EARTHWORKS</p>			

Item No	<u>Excavation for working space in rock</u>	Quantity	Rate	Amount
	Excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be			
	<u>Carting away of excavated material</u>			
	Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site			
	<u>Filling</u>			
	Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any necessary multiple handling of material			
	<u>Testing</u>			
	<i>Prices for filling are to include for all necessary density tests in accordance with SABS 1200D</i>			
	<u>EXCAVATIONS</u>			
	<u>Excavate in pickable material as described not exceeding 2 m deep below natural or reduced ground level and dispose as described for</u>			
A	Foundation trenches	m3	36	
B	Reduce levels under floors	m3	8	
C	<u>Extra over trench and hole excavations in earth for excavation in soft rock</u>	m3	1	
	Carried to Collection			ZK
	Bill No. 3 EARTHWORKS			

Item No		Quantity	Rate	Amount
D	<u>Extra over all excavations for carting away surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor</u>	m3	28	
E	Allow for supporting exposed vertical sides of excavations not exceeding 1,5 m deep against risk of collapse	m2	18	
F	Keeping excavations free of water other than subterranean water	Item		
	<u>FILLINGS</u>			
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 98% Mod AASHTO density in 200mm thick layers</u>			
G	In trenches	m3	11	
	<u>Earth filling of G5 material in accordance with SABS 1200 DM, supplied by the contractor, compacted to 97% Mod AASHTO density</u>			
H	Under floors	m3	42	
	<u>Compaction of surfaces</u>			
I	Compaction of ground surface including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	66	
	<u>Coarse river sand filling supplied by the contractor</u>			
J	25 mm Thick layer of clean dry sand filling spread and levelled to receive dampproofing (dampproofing elsewhere measured)	m2	141	
	Carried to Collection			ZK
	Bill No. 3 EARTHWORKS			

Item No	<u>ANT PROOFING</u>	Quantity	Rate	Amount
	<u>Approved antproofing poison in accordance with SABS 0124, 1164 and 1165, applied according to manufacturer's instructions and in accordance with the procedure set out in the General Preambles to all Trades</u>			
K	Uniformly to ground in bottom of foundation trenches, column bases, etc	m2	148	
L	Ditto, to ground or earth filling below solid floors including V-shaped channels as described	m2	136	
	Carried to Collection		ZK	
Bill No. 3 EARTHWORKS				

Bill No. 3

EARTHWORKS

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Bill No. 3
 EARTHWORKS

Item No	Quantity	Rate	Amount
<p><u>BILL NO 4</u></p>			
<p><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p>			
<p><u>Cost of tests</u></p>			
<p>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 an independent firm or institution nominated by the contractor to the approval of the principal agent. (Test cubes are measured separately)</p>			
<p><u>Formwork</u></p>			
<p>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</p>			
<p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself</p>			
<p>Formwork to soffits of solid slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described</p>			
<p>Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described</p>			
<p>Carried to Collection</p>		ZK	
<p>Bill No. 4 CONCRETE, FORMWORK & REINFORCEMENT</p>			

Item No			Quantity	Rate	Amount
	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"				
	<u>TEST CUBES</u>				
A	Making and testing 150 x 150 x 150mm concrete strength test cubes (Provisional)	No	12		
	<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
	<u>25MPa/19mm concrete</u>				
B	Foundations to walls including stepping and levelling	m3	11		
C	Ground beams	m3	7		
D	Surface beds laid in panels on dampproofing laid to falls	m3	3		
E	Slabs	m3	1		
F	Thickening down surface bed size 350 mm average wide x 200 mm deep (net) to form under brick wall, including all necessary excavation, trimming ground or filling, etc	m			
	<u>CONCRETE SUNDRIES</u>				
	<u>Finishing top surfaces of concrete smooth with a steel trowel</u>				
G	Vanity slabs	m2	6		
	<u>FORMWORK ETC TO CONCRETE</u>				
	Carried to Collection			ZK	
	Bill No. 4 CONCRETE, FORMWORK & REINFORCEMENT				

Item No		Quantity	Rate	Amount
	<u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u>			
H	Soffits of slabs	m2	4	
I	Edges, risers etc. not exceeding 300mm wide	m	21	
	<u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u>			
	<u>Smooth formwork to sides</u>			
J	Sides of foundation walls or ground beams	m2	47	
	<u>Sundries</u>			
	<u>Rough formwork to form</u>			
K	Opening in 100mm thick concrete slab to receive approximately 460 x 460mm basin (basin elsewhere)	No	7	
	<u>PERMANENT FORMWORK</u>			
L	Formwork formed of new galvanised corrugated iron sheet 600mm wide, temporarily supported along the length in the middle of the sheet	m	8	
	<u>REINFORCEMENT (PROVISIONAL)</u>			
	<u>Mild steel reinforcement to structural concrete work</u>			
M	8mm Diameter bars	kg		
	<u>High tensile steel reinforcement to structural concrete work</u>			
N	10mm Diameter bars	kg	682	
O	12mm Diameter bars	kg	472	
	Carried to Collection			ZK
	Bill No. 4 CONCRETE, FORMWORK & REINFORCEMENT			

Item No		Quantity	Rate	Amount
	<u>Fabric reinforcement</u>			
P	Type 193 fabric reinforcement in aprons etc	m2	9	
Q	Type 245 fabric reinforcement in concrete surface beds, ramps etc	m2	6	
R	Type 311 fabric reinforcement in concrete surface beds, ramps etc	m2	26	
	Carried to Collection			
				ZK

Bill No. 4
 CONCRETE, FORMWORK & REINFORCEMENT

Bill No. 4

CONCRETE, FORMWORK & REINFORCEMENT

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Bill No. 4

CONCRETE, FORMWORK & REINFORCEMENT

Item No	Quantity	Rate	Amount
<p><u>BILL NO 5</u></p>			
<p><u>MASONRY</u></p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p>			
<p><u>BLOCKWORK</u></p>			
<p><u>Concrete masonry units</u></p>			
<p>Blocks are to be either solid or hollow modular dense concrete masonry units having a compressive strength of 7MPa</p>			
<p><u>Wall ties for blockwork</u></p>			
<p>Wall ties shall be polypropylene ties complying with BS 76377. Ties for hollow walls shall be of sufficient length to allow not less than 75mm of each end to be built into the blockwork. Ties are to be spaced at intervals of not more than 1m in the horizontal direction and not more than 400mm staggered in the vertical direction except at openings, vertical joints or ends of walls where they are to be placed vertically above each other</p>			
<p><u>Blockwork</u></p>			
<p>Blockwork shall comply with SANS 10145 "Concrete Masonry Construction"</p>			
<p>Surfaces to be plastered shall have joints raked out to a depth of at least 10mm to provide a key. Cavities of hollow walls shall be kept free of mortar droppings or other undesirable matter. Every second perpend of the bottom course of the external skin of hollow walls shall be left open as a weep hole</p>			
<p>Carried to Collection</p>		<p>ZK</p>	
<p>Bill No. 5 MASONRY</p>			

Item No		Quantity	Rate	Amount
	<u>Standard complementary blocks</u>			
	Descriptions of blockwork shall be deemed to include standard complementary blocks such as corner, three-quarter, half and quarter blocks required in the construction of corners, reveals, jambs, ends, etc to solid and hollow walls and for bonding as necessary			
	<u>DECORATIVE BLOCKS</u>			
	Blocks shall be of approved manufacture, sound, well burnt or cured and uniform and true in size, shape and colour			
	<u>BRICK TESTS</u>			
	<u>BLOCKWORK IN FOUNDATIONS</u>			
	<u>Brickwork in Class S14 cement or burnt clay bricks built in 1:4 cement mortar</u>			
A	220mm Walls	m2	3	
B	330mm Walls	m2	7	
	<u>BRICKWORK IN SUPERSTRUCTURE</u>			
	<u>Brickwork in Class S7 cement or burnt clay bricks built in 1:4 cement mortar</u>			
C	110mm Walls	m2	136	
D	110mm Walls in closing up openings	m2	28	
E	220mm Walls	m2	18	
F	220mm Walls in closing up openings	m2	53	
G	Breeze wall 180mm wide comprising 400mm x 150mm x 180mm high precast concrete blocks, laid on sides in 1:4 mortar as described	m2	5	
	Carried to Collection			ZK
	Bill No. 5 MASONRY			

Item No			Quantity	Rate	Amount
H	110mm Wide x 150mm high shower wall	m	11		
	<u>BRICKWORK SUNDRIES</u>				
	<u>2.5mm Brickwork reinforcement</u>				
I	75mm Wide reinforcement built in horizontally	m	371		
J	75mm Wide reinforcement built in horizontally, in half-brick walls in foundations	m			
K	150mm Wide reinforcement built in horizontally	m	72		
L	150mm Wide reinforcement built in horizontally, in half-brick walls in foundations	m	18		
	<u>AIR BRICKS</u>				
M	175 x 230mm Galvanised mild steel air grating covered on back with best quality vermin proof copper gauze, and build in flush with wall face, including forming flue through one brick wall and pointing all round in cement mortar.	No	2		
	<u>PRECASTE CONCRETE</u>				
	<u>Prestressed reinforced concrete lintols, including necessary temporary support and building in ends not less than 220 mm deep into brickwork in 1:4 cement mortar</u>				
N	Approved concrete lintol formed of one 110 mm wide x 80 mm high lintol, placed in position over opening in half-brick wall (Provisional)	m	3		
	<u>Roadstone paving</u>				
O	60mm Thick rectangular 25MPa roadstone paving, as internal floors, as aprons laid to 1:10 slope as described including all cutting and waste and mass concrete (Class 35MPa) filling along edges	m2	115		
	Carried to Collection				ZK
	Bill No. 5 MASONRY				

Item No		Quantity	Rate	Amount
P	<p><u>Precast concrete Class 35 MPa steel trowelled to smooth, true and even surfaces on all exposed faces, including any necessary additional cement and including all necessary formwork, moulds and one layer of chicken wire mesh reinforcement embedded in centre of all units with straight arris rounded external angles, in</u></p>	m	8	
Q	<p>Kerb 100 mm wide x 300 mm high with one side splayed back for 150 mm and front corner rounded, cast in varying suitable lengths as required, jointed with 10 mm thick flush pointed cement mortar joints, finished smooth on all exposed faces and set on edge in ground including excavation, mass concrete Class 35 MPa filling, filling in and ramming (Provisional)</p>	m	2	
	<p>Carried to Collection</p>			ZK
	<p>Bill No. 5 MASONRY</p>			

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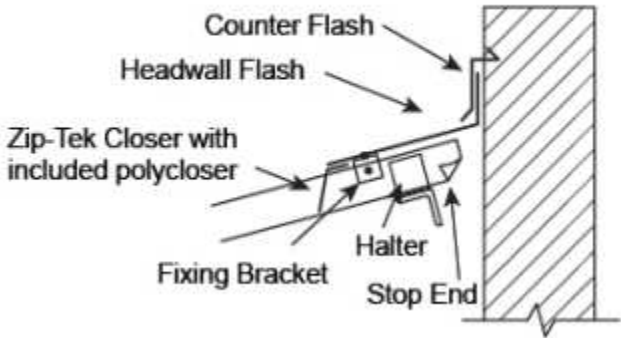
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Bill No. 5
 MASONRY

Item No	<u>BILL NO 6</u>	Quantity	Rate	Amount
	<u>WATERPROOFING</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Waterproofing</u>			
	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			
	<u>DAMPPROOFING OF WALLS AND FLOORS</u>			
	<u>One layer of 375 micron "Consol Plastics Brikgrip DPC" embossed or other similar approved damp proof course</u>			
A	Below walls, sills, etc	m2	10	
	<u>One layer of 250 micron "USB Green", or other similar approved waterproof sheeting sealed at laps with "Pressure Sensitive" or similar approved tape</u>			
B	Under surface beds	m2	26	
	Carried to Summary		ZK	
	Bill No. 6 WATERPROOFING			

Item No	<u>BILL NO 7</u>	Quantity	Rate	Amount
	<u>ROOF COVERINGS, ETC</u>			
	<u>PROFILED METAL SHEETING AND ACCESSORIES</u>			
	<u>0,58mm Thick Zip-Tek 420 profile or other approved Z275 galvanised concealed fix roofing system and accessories in single continuous lengths fixed to steel purlins (purlins elsewhere measured) in accordance with manufacturer's instructions by a GRS approved contractor</u>			
A	Roofing laid raking to not exceeding 25° pitch in single sheets (no end laps) in lengths not exceeding 2,5m and fixed to steel purlins	m2	130	
B	Ditto, in lengths not exceeding 4,5m and fixed to steel purlins	m2	363	
C	Extra over roof covering for raking cutting and waste	m		
D	0,8mm Ridge capping 450mm girth, including broad flute closers both sides			
	Ridge or Hipcap			
	<p>The diagram illustrates a cross-section of a roof ridge or hipcap. It shows two sheets of Zip-Tek Sheeting meeting at a central ridge. A Zip-Tek closer with an included polycloser is positioned at the ridge. A Halter is attached to the closer. A Stop End is located at the end of the sheeting, and a Fixing Bracket is used to secure the sheeting to the purlin.</p>	m	52	
E	Extra over ridge capping for closed end	No	5	
	Carried to Collection			ZK
	Bill No. 7 ROOF COVERINGS			

Item No		Quantity	Rate	Amount
F	Headwall flashings 350mm girth, including sealing top edge with mastic in and including groove in brickwork (counter flashing elsewhere measured)	m	56	
<p style="text-align: center;">Headwall Flash Detail</p> 				
G	Counter flashing at headwalls or sidewalls	m	56	
H	Bend down broad flutes of roof sheets with special tool to allow water run-off	m	70	
I	Apex flashing	m	31	
<p><u>1,6 mm Thick purpose made mild steel gutter as described in</u></p>				
J	Kliplok 406 or other similar and approved fascia gutter, made up in long lengths with welded joints, fixed in position to falls on and including standard galvanised steel brackets fixed to steel purlins at 900 mm centres	m	21	
K	Extra on last for stopped end	No	4	
L	Ditto, for rainwater outlet for 100 x 100mm downpipe, including nozzle, sieve and grating	No	4	
M	100 x 100 mm Rainwater pipe with welded joints fixed to walls or steel columns with and including 40 x 5 mm thick galvanised steel holderbats at not exceeding 1 m centres, cut and pinned to brickwork or welded to steel columns	m	18	
Carried to Collection			ZK	
Bill No. 7 ROOF COVERINGS				

Item No		Quantity	Rate	Amount
N	Extra on last for shoe	No	4	
	<u>ROOF VENTILATORS</u>			
	<u>Manufactured by "Turbo Vent" or other similar approved</u>			
O	300 mm Diameter aluminium "Whirlybird" or other similar and approved roof ventilator, with approved flashing all round including all fixing accessories and fixing to roof approximately 3,5m above ground level and leaving perfectly watertight	No	9	
P	300 mm Diameter ditto, but fixed on and including forming opening in existing roof sheeting, and leave completely watertight	No		
	<u>ROOF AND WALL INSULATION</u>			
Q	75mm Thick Alucool or other similar and approved non-combustable brown glass mineral wool insulation with reinforced aluminium foil on one side, laid taut over purlins (at approximately 1500mm centres) and fixed concurrent with roof covering (Africa Thermal Insulations, ati@atiinsulations.co.za)	m2		
	<u>Sisalation FR405 or other similar and approved double sided, fire retardant industrial grade reflective reinforced aluminium foil insulation, drawn tautly and supported between purlins by 1,6mmØ double galvanised straining wires starting at 75mm centre then 275mm, 275mm, 275mm, 275mm and 75mm centres across each roll width securely fixed across top of purlins, with Sisalation lapped 150mm on both sides of each 1250mm width roll.</u>			
R	Insulation laid taut over purlins (at approximately 1500mm centres) and fixed concurrent with roof covering	m2	439	
	Carried to Collection			ZK
	Bill No. 7 ROOF COVERINGS			

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ROOF COVERINGS

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Bill No. 7
 ROOF COVERINGS

Item No	<u>BILL NO 8</u>	Quantity	Rate	Amount
	<u>CARPENTRY AND JOINERY</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Fixing</u>			
	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			
	<u>Joinery</u>			
	Descriptions of frames shall be deemed to include frames, transomes, rails, etc			
	Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts			
	<u>EAVES, VERGES, ETC</u>			
	<u>High density plain fibre-cement fascias and barge boards</u>			
A	10 x 225 mm Fascia or barge board twice screwed to steel purlin at approximately 500 mm centres including holes, H-section jointing strips, mitres, etc	m	31	
	<u>DOORS, ETC</u>			
	Carried to Collection		ZK	
	Bill No. 8 CARPENTRY AND JOINERY			

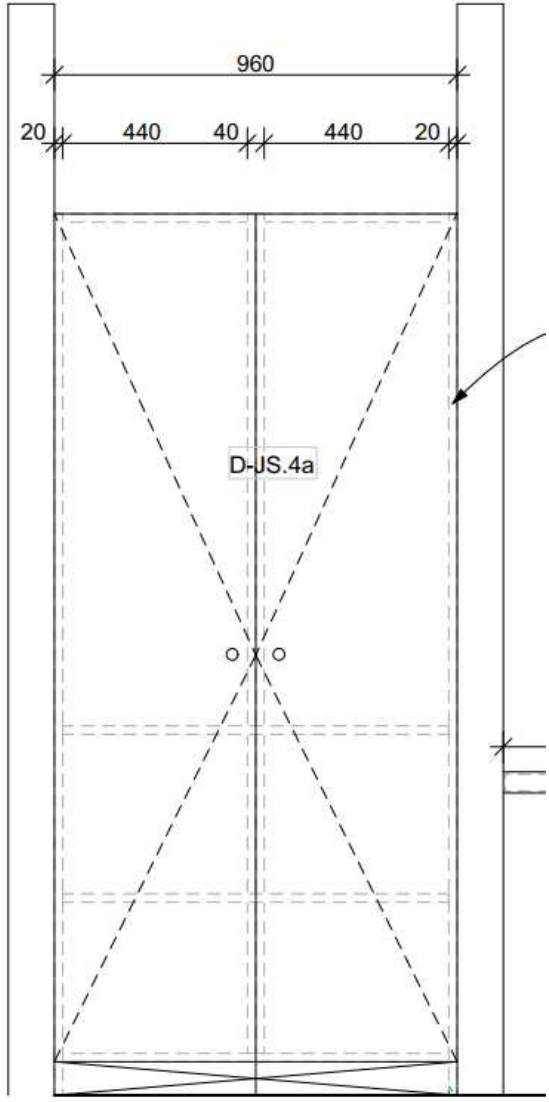
Item No		No	Quantity	Rate	Amount
	<u>Approved semi-solid core flush doors with hardwood edge strips and finished with approved veneer suitable to receive paint on both faces</u>				
B	40 mm Thick door size 0,762 wide x 1,65m high	No	6		
C	40 mm Thick door size 0,813 wide x 1,65m high	No	2		
	<u>Wrot Meranti</u>				
D	44 mm Thick framed <u>flyscreen</u> door size 789mm wide x 2,032m high, formed of 150 mm stiles, middle rail and top rail, and 22 x 228 mm bottom ledge, the stiles and rails rebated for and including two 6,38mm obscure safety glass panels fixed with timber beads	No	14		
E	44 mm Thick framed <u>flyscreen</u> door size 1,044m wide x 1,96m high, formed of 150 mm stiles, middle rail and top rail, and 22 x 228 mm bottom ledge, the stiles and rails rebated for insect screens (screens elsewhere)	No			
F	44 mm Thick framed, ledged and braced flush both sides batten door size 879mm wide x 2,032m high, formed of 150 mm stiles and top rail, two 18 x 150 mm middle ledges, 22 x 228 mm bottom ledge and two 18 x 114 mm diagonal braces, the stiles, rails and ledge grooved for and filled in flush on one side with 22 mm tongued, grooved and V-joint vertical boarding in 76 mm widths with V-joint continued along stiles including twice brass countersunk screwing each vertical board at each intersection with ledges and braces, covered on other side with 4 mm plywood with Sapele Mahogany veneer including all necessary rebates in stiles and ledges, complete with 38 x 76 mm rebated and splayed weather bar screwed to and including groove in bottom ledge	No	2		
	Carried to Collection				ZK
	Bill No. 8 CARPENTRY AND JOINERY				

Item No		Quantity	Rate	Amount
G	<p>44 mm Thick framed, ledged and braced flush both sides stable door overall size 879mm wide x 2,032m high,</p> <p>-the bottom opening panel 1,022m high, formed of 150 mm stiles and top rail, 22 x 228 mm bottom ledge and one 18 x 114 mm diagonal brace, the stiles and top rail grooved for and filled in flush on one side with 22 mm tongued, grooved and V-joint vertical boarding in 76 mm widths with V-joint continued along stiles including twice brass countersunk screwing each vertical board at each intersection with ledges and braces, covered on other side with 4 mm plywood with Sapele Mahogany veneer including all necessary rebates in stiles and ledges, complete with 38 x 76 mm rebated and splayed weather bar screwed to and including groove in bottom ledge</p> <p>-the top opening panel 1,01m high, formed of 150 mm stiles, bottom rail and top rail, and 22 x 228 mm bottom ledge, all once rebated for and including 6,38mm obscure safety glass panel fixed with timber beads</p>	No	14	
	<u>FITTINGS</u>			
	<u>Horizontal flip door to counter (Tuckshop)</u>			
	<u>Wrot Meranti or other similar and approved local hardwood</u>			
H	800mm Long x 550mm wide x 25mm thick panel	No		
	<u>The following in pelmets</u>			
I	16 x 150 mm Supawood housed top	m	29	
J	16 x 120 mm Supawood sides, including framed front and ends	m	34	
	Carried to Collection			ZK
	Bill No. 8 CARPENTRY AND JOINERY			

Item No		Quantity	Rate	Amount
	<u>Drywalls</u>			
K	22mm Thick Supawood drywall panel size 960mm wide x 2,6m high, countersunk screwed to timber supports (elsewhere measured) at not exceeding 300mm centres along all edges	No	12	
L	50 x 50mm Wrot SAP or other similar and approved CCA treated drywall support	m	23	
M	Ditto, but plugged to wall at not exceeding 500mm centres	m	31	
	<u>The following in frames for windows</u>			
N	44 x 75mm Wrot Meranti or other similar and approved hardwood frame, once rebated and plugged to wall at not exceeding 300mm centres, sealed with silicon on both sides between frame and wall	m	36	
O	44 x 150mm Wrot Meranti or other similar and approved hardwood frame, once rebated and plugged to wall at not exceeding 300mm centres, sealed with silicon on both sides between frame and wall	m	158	
P	Extra over last item for slightly tapering down 75mm width of frame from 44mm thickness to 30mm thickness (to form sloping sill)	m	18	
Q	22 x 22mm Wrot Meranti or other approved hardwood spacer, tapering to a thickness of 15mm along the length of the spacer and fixed between bottom of window and hardwood frame (window and frame elsewhere measured)	m	18	
R	44 x 150mm Wrot Meranti or other similar and approved hardwood frame, twice rebated, as vertical or horizontal mullion	m	45	
	Carried to Collection			ZK
	Bill No. 8 CARPENTRY AND JOINERY			

Item No		Quantity	Rate	Amount
	<u>The following in Work Tables and Benches</u>			
S	550 x 550 x 40mm Thick approved local hardwood slab screwed through and including holes through 2mm thick steel along edges at not exceeding 180mm centres with and including 6 x 20mm brass screws	No	32	
T	576 x 876 x 40mm Thick ditto	No	32	
U	316 x 439 x 40mm Thick ditto, to side tables of bunk beds	No	32	
Carried to Collection				ZK
Bill No. 8 CARPENTRY AND JOINERY				

Item No	<u>Built-in cupboards</u>	Quantity	Rate	Amount
V	<p><u>The following in cupboards comprising 20mm thick approved local hardwood bottoms, tops, shelves and dividers on 20 x 40mm hardwood supports plugged to block walls or screwed to timber where necessary, with a 75mm high hardwood plinth at the bottom</u></p> <p>Built-in cupboard overall size 600mm wide x 2,1m high, comprising one door 2,1m high, top, bottom and two shelves, one side, and ten 20 x 40mm x 600mm long supports plugged to block walls, (Ironmongery elsewhere measured)</p>	No	4	ZK
	Carried to Collection			
	Bill No. 8 CARPENTRY AND JOINERY			

Item No		Quantity	Rate	Amount
W	<p>Built-in cupboard overall size 960mm wide x 2,1m high, comprising two identical doors 2,1m high, top, bottom and two shelves, and ten 20 x 40mm x 600mm long supports plugged to block walls, (Ironmongery elsewhere measured)</p> 	No	14	ZK
	Carried to Collection			
	<p>Bill No. 8 CARPENTRY AND JOINERY</p>			

Item No		Quantity	Rate	Amount
	<u>The following in pinning boards</u> <u>(Provisional)</u>			
X	13mm Thick fibreboard glued to hardboard backing (measured elsewhere)	m2	1	
Y	3mm Thick hardboard backing plugged to brick wall by not less than three screws per m ²	m2	1	
Z	75 x 32mm Twice rebated hardwood framed frame countersunk plugged to brickwork at not exceeding 300mm centres	m	4	
	<u>Shelving</u>			
AA	16mm Thick wrot South African pine shelf 305mm wide, screwed to shelf brackets (elsewhere measured) at not exceeding 500mm centres	m		
	<u>Gumpoles</u>			
	Gumpoles shall be CCA treated Eucalyptus or other similar and approved, and prices should include for such treatment			
AB	75mm Diameter x 2,4m long gum pole columns	No	53	
AC	150mm Diameter x 2,4m long gumpole columns	No	23	
AD	250mm Diameter x 2,4m long gumpole columns	No	20	
	Carried to Collection			ZK
	Bill No. 8 CARPENTRY AND JOINERY			

Item No		Quantity	Rate	Amount
AE	Extra over 75mm gum poles for fixing to concrete according to Engineer's detail below	No	53	
AF	Ditto, for 150mm gum pole	No	23	
AG	Ditto, for 250mm gum pole	No	20	
AH	Extra over 75mm diameter gumpole for fixing top end to roof construction, according to Engineer's detail below (roof sheeting, purlins, end plates and main support beam elsewhere measured)	No	53	
Carried to Collection				ZK
Bill No. 8 CARPENTRY AND JOINERY				

**BK1073 - Katete Forestry Phase 1a
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Schedule of Quantities**

Item No			Quantity	Rate	Amount
AI	Ditto, for 150mm gum pole	No	23		
AJ	Ditto, for 250mm gum pole	No	20		
Carried to Collection					ZK
Bill No. 8 CARPENTRY AND JOINERY					

Bill No. 8

CARPENTRY AND JOINERY

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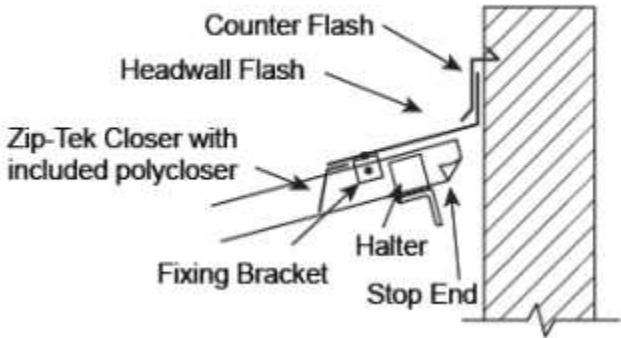
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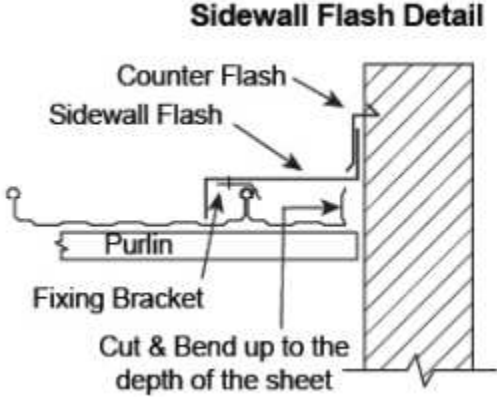
Bill No. 8

CARPENTRY AND JOINERY

Item No	Quantity	Rate	Amount
<p><u>BILL NO 9</u></p>			
<p><u>CEILING, PARTITIONS AND ACCESS FLOORING</u></p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p>			
<p><u>Fixing</u></p>			
<p>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</p>			
<p>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</p>			
<p><u>Ceilings</u></p>			
<p>Unless otherwise described ceilings shall be deemed to be horizontal</p>			
<p><u>Bulkheads</u></p>			
<p>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</p>			
<p>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</p>			
<p>Unless otherwise described bulkheads shall be deemed to be horizontal along the length</p>			
<p>Carried to Collection</p>		ZK	
<p>Bill No. 9 CEILING, ETC.</p>			

Item No	<u>Steel components</u>	Quantity	Rate	Amount
	All steel components for ceilings, partitions, etc are to be galvanised in accordance with SANS 121			
	<u>PROFILED METAL SHEETING CEILINGS AND ACCESSORIES</u>			
	<u>Ceiling Covering</u>			
	<u>0,5mm Thick galvanized ISQ550 corrugated iron roof covering and fixing accessories, securely fixed to underside of steel trusses including all cutting and waste and taking up plaster into troughs of sheets</u>			
A	Sheets laid raking to not exceeding 25 degrees in single sheets (no end laps) in not exceeding 4m lengths, fixed to steel trusses (elsewhere measured)	m2	28	
B	Extra on corrugated iron ceiling for forming opening for ventilation screen size 300 x 300mm (screen elsewhere measured), the opening to comprise 50 x 50 x 5mm thick angle-section framed frame welded to ceiling runners (contractor to supply any necessary additional runners)	No	2	
	<u>0,58mm Thick Zip-Tek 420 profile or other approved ISQ300 Chromadek or other similar and approved white pre-painted concealed fix roofing system and accessories in single continuous lengths fixed to steel purlins (purlins elsewhere measured) in accordance with manufacturer's instructions by a GRS approved contractor</u>			
C	Sheets laid flat in single sheets (no end laps) in short lengths, fixed upside down to steel battens (battens elsewhere measured)	m2	19	
	Carried to Collection			ZK
	Bill No. 9 CEILINGS, ETC.			

Item No		Quantity	Rate	Amount
D	Sheets laid raking in single sheets (no end laps) in not exceeding 3,5m lengths, fixed upside down to steel battens (battens elsewhere measured)	m2		
E	Extra on ZipTek ceiling for forming opening for ventilation screen size 300 x 300mm (screen elsewhere measured), the opening to comprise 50 x 50 x 5mm thick angle-section framed frame welded to ceiling runners (contractor to supply any necessary additional runners)	No	14	
<u>Sheetmetal cornices, closers etc</u>				
F	Headwall flashings 350mm girth, including sealing top edge with mastic in and including groove in brickwork (counter flashing elsewhere measured)			
	<p style="text-align: center;">Headwall Flash Detail</p> 	m	26	
Carried to Collection				ZK
Bill No. 9 CEILINGS, ETC.				

Item No		Quantity	Rate	Amount
G	Sidewall flashings 350mm girth, including sealing top edge with mastic in and including groove in brickwork (counter flashing elsewhere measured)			
		m	40	
H	75 x 75 x 1,6mm Thick sheet metal angle-section cornice plugged to wall at not exceeding 300mm centres	m	309	
Carried to Collection				ZK
Bill No. 9 CEILINGS, ETC.				

Bill No. 9

CEILINGS, ETC.

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Bill No. 9
 CEILINGS, ETC.


Item No	<u>BILL NO 10</u>	Quantity	Rate	Amount
	<u>IRONMONGERY</u>			
	<u>Manufactured by "ASSA Abbloy" or other similar approved</u>			
	<u>Hinges, etc.</u>			
A	32mm Wide x 550mm long Mackie or other similar and approved brass plated steel piano hinge, screwed with and including 5mm x 20mm long countersunk brass screws to timber			
		No		
B	Code 8352-100SS/2 powerload bronze bushed hinge with plated mild steel finish, fixed to timber	Pairs	52	
C	Code X-SS194 RSL-3-SS / X-SS194 RSR-3-SS stainless steel falling butt hinge screwed to timber	Pairs	8	
	<u>Flush bolts, closers, etc.</u>			
D	75mm Electrogalvanised barrel bolt screwed to timber	No	14	
E	Code K87441 - 452 full surface double acting door spring (overall length 275mm) screwed to timber	No	16	
	<u>Locksets, etc.</u>			
F	51mm Two-lever mild steel brass plated straight cupboard lock code 423-51/1 with two keys	No	28	
	Carried to Collection			ZK
	Bill No. 10 IRONMONGERY			

Item No		Quantity	Rate	Amount
G	BBL43564-1 or other similar and approved 3 Lever Cupboard Lockset including three keys	No	8	
H	Code CZ80941CH cast zinc indicator bolt	No	8	
I	Code L-2109 Euro cylinder deadlock with and including double cylinder and three (3) keys	No	14	
J	Code CZ692-05-222 radius Euro profile cylinder lockset with SC finish	No	14	
	<u>Stops, handles, coat hooks, etc.</u>			
K	Code 99011 stainless steel door stop	No	8	
L	100 mm Solid Brass cabin hook and eye as Builder's Warehouse code EB3002 including a 25 x 50 x 100 mm hardwood block plugged to wall and oiled	No	28	
M	Code AL8253AS Rubber Tipped Coat Hook	No	104	
N	Code SS5D93-22-06 stainless steel pull handle on 228 x 76mm backplate, screwed to timber door	No	16	
	<u>Push plates and kick plates</u>			
O	Code SS5089-150W stainless steel kick plate size 1,2mm thick x 800mm wide x 150mm high, screwed to timber	No	2	
P	Code SS5023-228W stainless steel push plate size 1,2mm thick x 152mm wide x 228mm high, screwed to timber	No	2	
	Carried to Collection			ZK
	Bill No. 10 IRONMONGERY			



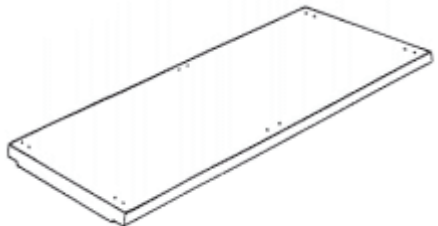
**BK1073 - Katete Forestry Phase 1a
Dormitory & Ablutions
Schedule of Quantities**


Item No			Quantity	Rate	Amount
	<u>Bathroom fittings</u>				
Q	30mm Diameter x 600mm long chromium plated rod fixed mto ends with approved brackets	No	32		
R	20mm Diameter chromium plated shower curtain rail 900mm long with pair of chromium plated brackets as "Solid Art 262/E40" or other similar approved plugged and screwed to tiled brick walls and fitted with ten approved clear plastic shower curtain rings.	No	10		
S	Approved plastic shower curtain to suit opening size 900 x 2000mm high complete with hems and 50% horizontal gather and hang in position on curtain rings (elsewhere measured).	No	10		
T	750mm Long chromium plated Lusso Verde or other similar and approved single towel rail plugged to plastered or tiled wall or drywall with approved brackets	No	36		
U	Taurus TR2 white toilet roll dispenser (code SD1305-48-0602)	No	8		
V	Franke CNTX300 straight stainless steel grab rail with FFG surface fixed to wall	No	1		
W	Franke CNTX21 90 degree angle bar with FFG surface grab rail fixed to wall	No	1		
X	850 x 100 x 249mm Franke CNTC70B stainless steel fold down paraplegic grab rail fixed to wall	No	1		
	Carried to Collection			ZK	
	Bill No. 10 IRONMONGERY				

Item No		Quantity	Rate	Amount
	<u>"Serra" or other similar approved fittings</u>			
Y	Lee SD1199 bronze soap dispenser plugged to plastered or tiled wall 	No	10	
	<u>Curtain tracks</u>			
Z	Kirsch or similar approved PVC I-section curtain track reinforced with metal core, screwed to underside of wood pelmet with brackets at 450 mm centres, bent at overlap as necessary, including two end stops per length of track and PVC gliders at 75 mm centres	m	29	
AA	Riloga No 498/1 or similar approved pelmet bracket plugged to wall (Provisional)	No	42	
	<u>Signage</u>			
	<u>1,2mm Thick aluminium key tags engraved with black Helvetica type text for each set</u>			
AB	35mm Diameter with not exceeding four (4) numbers or letters 6mm high	No	72	
	Carried to Collection			ZK
	Bill No. 10 IRONMONGERY			

Item No		Quantity	Rate	Amount
AC	<p><u>1,2mm Thick aluminium name/numberplates engraved with black Helvetica type text screwed to timber or aluminium with self cutting stainless steel screws</u></p> <p>50mm Wide x 25mm high with not exceeding four (4) numbers or letters 15mm high</p>	No	24	
AD	<p><u>5 mm Thick approved clear perspex</u></p> <p>5 mm Thick approved clear perspex number plate size 100 mm high containing not more than ten (10) 60 mm high "Arial" type numerals or letters in black engraved from back and evenly spaced, screwed to timber with and including four 6 x 40mm stainless steel screws</p>	No	24	
AE	<p><u>Shelco Shelving or other similar and approved shelving system</u></p> <p>Double slotted wall band 1,22m long plugged to wall</p> 	No		
AF	<p>Double slotted wall band 2,11m long plugged to wall</p>	No		
Carried to Collection				ZK
<p>Bill No. 10 IRONMONGERY</p>				

**BK1073 - Katete Forestry Phase 1a
Dormitory & Ablutions
Schedule of Quantities**

Item No		Quantity	Rate	Amount
AG	Shelf bracket for 305mm wide wood shelf and double slotted wall band (elsewhere) 	No		
AH	Shelf bracket for 365mm wide steel shelf and double slotted wall band (elsewhere) 	No		
AI	Steel shelf size 914mm long x 365mm deep, fixed to shelf bracket (bracket elsewhere measured) 	No		
Carried to Collection			ZK	
Bill No. 10 IRONMONGERY				

Item No	<u>Sundries</u>	Quantity	Rate	Amount
AJ	900mm Wide x 1,8m high x 450mm deep approved fully lockable powder coated steel cupboard, complete with four adjustable shelves 	No		
AK	910mm Wide x 2,2m high x 450mm deep shelving unit as per Ellies DIY Shelves 2.2 Upright 450 Shelf or other similar and approved	No		
AL	Vulcan SST 2250 or other similar and approved stainless steel type 430 table and legs with adjustable foot pieces and heavy duty galvanised backing sheet, overall size 2,25m long x 750mm wide x 910mm high	No		
Carried to Collection			ZK	
Bill No. 10 IRONMONGERY				

Bill No. 10
 IRONMONGERY
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Bill No. 10
 IRONMONGERY

Item No		Quantity	Rate	Amount
	<u>BILL NO 11</u>			
	<u>STRUCTURAL STEELWORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	All structural steel to be grade 300W. All steel bolts to be grade 8.8 All workshop drawings to be to the approval of the Engineer			
	<u>Descriptions</u>			
	Descriptions of bolts shall be deemed to include nuts and washers			
	Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete			
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete			
	<u>The following in lean-to roof construction over pergola, including all necessary holes, slotted holes, bolts, anchor bolts, welding, cutting, splayed ends, etc, hoisting and fixing in position 2,8m high above ground floor level, including any necessary bracing, etc required to maintain in position during erection and prime all members with a prime coat as described before fixing</u>			
A	Flat-section base plates, gusset plates, cleats, etc.	kg	115	
B	76 x 50 x 3mm Hollow-section (6,814 kg/m) rafters	kg	1 160	
C	Extra for welding close end of rafter size not exceeding 76 x 50mm	No	34	
	Carried to Collection			ZK
	Bill No. 11 STRUCTURAL STEELWORK			

BK1073 - Katete Forestry Phase 1a
Dormitory & Ablutions
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Item No		Quantity	Rate	Amount
D	Extra for 16mm diameter x 100mm long bolt plugged to brick wall through and including hole in 3mm thick steel	No	24	
E	Extra for forming 32mm diameter hole through 3mm thick steel section	No	24	
F	60 x 40 x 3mm Hollow-section purlins (4,476 kg/m)	kg	505	
	<u>The following in roof construction over two new bedrooms, including all necessary holes, slotted holes, bolts, anchor bolts, welding, cutting, splayed ends, etc, hoisting and fixing in position 2,8m high above ground floor level, including any necessary bracing, etc required to maintain in position during erection and prime all members with a prime coat as described before fixing</u>			
G	150 x 50 x 20 x 2,5mm Thick cold formed lipped channel rafter (5,33kg/m)	kg	115	
H	75 x 50 x 20 x 2,5mm Thick Cold formed lipped channel purlins (2,96kg/m) fixed to steel roof trusses	kg	78	
	<u>The following in purlins, etc to roof trusses including all necessary holes, slotted holes, welding, cutting, splayed ends, bolts, washers etc, hoisting up and fixing in position and prime all members with a prime coat as described before fixing</u>			
I	250 x 50 x 20 x 2,5 mm Double lipped channel-section ceiling bearer	kg		
J	125 x 50 x 20 x 2,5 mm Lipped channel-section ceiling bearer	kg		
	Carried to Collection		ZK	
	Bill No. 11 STRUCTURAL STEELWORK			

**BK1073 - Katete Forestry Phase 1a
Dormitory & Ablutions
Schedule of Quantities**

Item No		Quantity	Rate	Amount
K	75 x 50 x 20 x 2,5 mm Lipped channel-section purlins fixed on top of existing corrugated iron roof sheeting with and including bolts with sufficient length to reach existing steel roof trusses	kg 935		
L	75 x 50 x 20 x 2,5 mm Lipped channel-section ceiling bearers fixed to bottom of existing steel roof trusses at not exceeding 2,1m centres	kg		
M	Carefully cut opening approximately 80mm long x 6mm wide in existing roof covering next to existing purlin	No 316		
N	170 x 80 x 6mm Thick flat section cleat, holed four times and bolted with four (4) 12mm diameter bolts to existing purlin, allowing for working in confined spaces	No 316		
Carried to Collection			ZK	
Bill No. 11 STRUCTURAL STEELWORK				

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STRUCTURAL STEELWORK

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Bill No. 11

STRUCTURAL STEELWORK

Item No		Quantity	Rate	Amount
	<u>BILL NO 12</u>			
	<u>METALWORK</u>			
	<u>MILD STEEL</u>			
	<u>Ceiling supports</u>			
A	50 x 50 x 3mm Angle-section plugged to walls at not exceeding 500mm centres	kg	125	
	<u>Insect screens</u>			
B	50 x 50 x 3mm Thick Angle-section framed frame, including mitres, intersections, etc.	kg	624	
C	40 x 40 x 3mm Thick angle-section framed frame, including mitres, intersections, etc.	kg	464	
D	Approved welded mesh comprising 2mm thick wire and 25 x 25mm openings, <u>galvanised after welding</u> (Ecotao Enterprises, Enterprises, South Africa, cell +27 82 390 3989, tel. +27 21 9115835, aqua@ecotao.co.za or other approved supplier)	m2	57	
E	Fine stainless steel 304 plain woven mesh comprising 0,17mm wire and 0,15mm apertures	m2	57	
F	8mm Diameter x 30mm long brass screws fixed through and including holes through 6mm steel to timber frame	No	1 285	
	<u>Supports for benches and work tables</u>			
G	50 x 50 x 3mm Thick angle-section framed frame, including mitres, intersections, etc.	kg	394	
	Carried to Collection			ZK
	Bill No. 12 METALWORK			

Item No		No	Quantity	Rate	Amount
H	Extra over last item for plugging to wall with and including 10mm thick x 70mm long coach screw and fischer plug, through and including hole through 3mm thick steel	No	192		
I	38 x 38 x 3mm thick hollow-section support	kg	231		
J	Extra over last item for welding close one end and installing approved adjustable M10 rubber Foot				
	 <p>RJK 2 x Adjustable M10 Ru</p>	No	80		
	<u>Alterations to existing steel beds</u>				
K	42,8mm Diameter x 3mm wall thickness circular hollow-section supports	kg	441		
L	Extra on last for welding one end to existing steel frame	No	98		
	Carried to Collection			ZK	
	Bill No. 12 METALWORK				

**BK1073 - Katete Forestry Phase 1a
Dormitory & Ablutions
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Item No			Quantity	Rate	Amount
M	Extra for welded T-intersection	No	56		
N	Extra for welding close end of 42,8mm diameter hollow-section with 3mm thick steel cap	No	56		
O	18mm Diameter steel rod 45mm long, welded to hollow-section (elsewhere measured) at a slight angle	No	84		
<u>New side tables to existing bunk beds</u>					
P	50 x 100 x 3mm Thick angle-section framed frame including mitres, etc.	kg	51		
Q	50 x 50 x 3mm Thick angle-section framed frame including mitres, etc.	kg	86		
R	10mm Diameter x 20mm long black bolt with head, nut and two washers, bolted through and including holes through 6mm steel	No	96		
<u>The following in washing lines</u>					
S	50 x 50 x 3mm Thick angle-section framed frame	kg	14		
T	Extra for Fischer plugging frame to brick wall with and including 10 x 70mm coach screw through and including hole through 3mm thick steel	No	12		
U	4mm Diameter approved PVC coated steel washing line fixed through turnbuckles (elsewhere measured) to approved tension	m	62		
V	50mm Diameter x 2,34mm thick medium class mild steel horizontal section 1m long with closed ends, four times holed for small bolts (bolts elsewhere) and T-jointed to post (elsewhere)	No	9		
Carried to Collection				ZK	
Bill No. 12 METALWORK					

Item No		Quantity	Rate	Amount
W	50 mm Diameter x 2,34 mm thick galvanised mild steel tubular post 2,5 m long with and including 2,15m long support bolted at obtuse angle to post including casting post and support each in and including a 400 x 400 x 450mm 15MPa concrete footing, all earthworks included	No	4	
X	10mm Diameter adjustable galvanised hook bolt with two nuts and two washers fixed through hole on pipe	No	6	
<u>ALUMINIUM WINDOWS, DOORS, ETC</u>				
<u>Refer to Architects drawing when pricing the following windows (the drawing is attached to these bills of quantities)</u>				
<u>The following in Aluvent Unisert or other similar and approved adjustable glass louvres in natural anodised aluminium operating system, factory pre-glazed with 5mm thick clear glass louvre blades</u>				
Y	Adjustable louvre window 922mm wide x 705mm high, screwed to timber frame all round (frame elsewhere measured) (KWS.01)	No		
Z	Adjustable louvre window 922mm wide x 500mm high, screwed to timber frame all round (frame elsewhere measured) (SNV-06)	No		
AA	Adjustable louvre window 922mm wide x 828mm high, screwed to timber frame all round (frame elsewhere measured) (KWS.02)	No		
AB	Adjustable louvre window 1,1m wide x 1,054m high, screwed to timber frame all round (frame elsewhere measured) (KWS.03)	No		
AC	Adjustable louvre window approximately 879mm wide x 965mm high, screwed to timber frame all round (frame elsewhere measured)	No	14	
Carried to Collection				ZK
Bill No. 12 METALWORK				

**BK1073 - Katete Forestry Phase 1a
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Schedule of Quantities**

Item No		Quantity	Rate	Amount
AD	Adjustable louvre window approximately 879mm wide x 976mm high, screwed to timber frame all round (frame elsewhere measured)	No 14		
AE	Adjustable louvre window approximately 579mm wide x 966mm high, screwed to timber frame all round (frame elsewhere measured)	No		
<p><u>The following in Aluvent Unisert or other similar and approved adjustable glass louvres in natural anodised aluminium operating system, factory pre-glazed with 5mm thick OBSCURE glass louvre blades</u></p>				
AF	Adjustable louvre window 695mm wide x 516mm high, screwed to timber frame all round (frame elsewhere measured) (DWS.01)	No 8		
AG	Adjustable louvre window approximately 600mm wide x 600mm high, screwed to timber frame all round (frame elsewhere measured) (DWS.02)	No 18		
AH	Adjustable louvre window approximately 600mm wide x 400mm high, screwed to timber frame all round (frame elsewhere measured) (DWS.03)	No 1		
AI	Adjustable louvre window approximately 600mm wide x 200mm high, screwed to timber frame all round (frame elsewhere measured) (DWS.04)	No 1		
Carried to Collection				ZK
Bill No. 12 METALWORK				

Bill No. 12

METALWORK

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Bill No. 12
 METALWORK

Item No	Quantity	Rate	Amount
<p><u>BILL NO 13</u></p>			
<p><u>PLASTERING, ETC</u></p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p>			
<p><u>GRANOLITHIC</u></p>			
<p><u>Method</u></p>			
<p>The method to be used shall be either the monolithic method or the bonded method</p>			
<p><u>Preparation</u></p>			
<p>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</p>			
<p><u>Mix</u></p>			
<p>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</p>			
<p>Carried to Collection</p>		<p>ZK</p>	
<p>Bill No. 13 PLASTERING</p>			

Item No		Quantity	Rate	Amount
	<p><u>Panels</u></p> <p>Granolithic shall be laid in panels not exceeding 14m² for monolithic finishes, not exceeding 9,5m² for bonded finishes and not exceeding 6m² 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</p> <p>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</p> <p><u>Laying</u></p> <p>Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels</p> <p>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</p> <p>After wood floating, the monolithic and bonded granolithic shall remain undisturbed until bleeding has ceased and the surface has stiffened. Any remaining bleed water and laitance shall then be removed and the surface steel trowelled or power floated</p> <p><u>Curing, seasoning and protection</u></p> <p>Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying</p>			
	Carried to Collection		ZK	
	Bill No. 13 PLASTERING			

Item No		Quantity	Rate	Amount
	<u>Colour</u>			
	Coloured granolithic shall be tinted with an approved colouring pigment mixed into a true and even colour			
	<u>Screeds, etc</u>			
	<u>1:3 Cement and sand screeds as described</u>			
A	30 mm Thick to receive floor coverings (Provisional)	m2	10	
	<u>EXTERNAL PLASTER</u>			
	<u>Render one coat 1:4 external cement plaster as described to</u>			
B	Brick walls	m2	23	
C	Ditto, in patches	m2	5	
D	Ditto, in foundations	m2		
E	Existing brick walls (preparation of brick surface elsewhere measured)	m2	300	
F	Concrete beams	m2		
	<u>INTERNAL PLASTER</u>			
	<u>Render one coat 1:4 internal cement plaster as described to</u>			
G	Brick walls	m2	95	
H	Ditto, in patches	m2	5	
I	Existing brick walls (preparation of brick surface elsewhere measured)	m2	611	
J	Concrete beams	m2		
	Carried to Collection			
	Bill No. 13 PLASTERING		ZK	

**BK1073 - Katete Forestry Phase 1a
Dormitory & Ablutions
Schedule of Quantities**

Item No		Quantity	Rate	Amount
K	Narrow widths on horizontal top surfaces	m2	4	
	Carried to Collection			ZK
	Bill No. 13 PLASTERING			

Bill No. 13

PLASTERING

COLLECTION

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No

Amount

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Carried to Summary

ZK

Bill No. 13
 PLASTERING

Item No		Quantity	Rate	Amount
	<u>BILL NO 14</u>			
	<u>TILING</u>			
	<u>WALL TILING</u>			
	<u>White glazed wall tiling of Grade 1 200 x 200 x 6,2mm thick tiles with 5 mm wide continuous joints in both directions pointed in Tal Professional or other approved grouting as described to</u>			
A	Brick walls	m2	174	
	<u>FLOOR TILING</u>			
	Note : Where a Prime Cost is prescribed (P.C.), the Tenderer should include the material cost as well as his labour, profit, waste and all other cost items in his rate			
	<u>Ceramic floor tiling of tiles (P.C. N\$ 300,00/m² in Lusaka for tiles only, VAT excluded) bedded to true and even surfaces in 1:3 cement mortar with 5 mm wide continuous joints in both directions pointed in Tal Professional or other approved light grey grouting</u>			
B	Floors	m2	216	
C	Floors in door openings	m2	6	
D	150 mm High skirting formed of 300 x 300 mm floor tiles as described to walls	m	309	
E	Cut and fit ceramic tiles around W C pan	No	8	
	Carried to Collection			ZK
	Bill No. 14 TILING			

Item No		Quantity	Rate	Amount
F	<u>Ceramic Anti-slip floor tiling of mosaic tiles to shower floors (P.C. N\$ 400,00/m² in Lusaka for tiles only, VAT excluded) bedded to true and even surfaces in 1:3 cement mortar with 5 mm wide continuous joints in both directions pointed in Tal Professional or other approved light grey grouting</u>	m2	10	
G	<u>Tile trims, etc.</u> 10mm "Schluter Rondec RO 100 AE" or other similar approved brushed aluminium tile edge trim.	m	82	
H	<u>SUNDRIES</u> <u>White glazed ceramic</u> 170 x 170mm Recessed soap dish	No	10	
Carried to Collection				ZK
Bill No. 14 TILING				

Bill No. 14

TILING

COLLECTION

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No**

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Amount

Carried to Summary

ZK

Bill No. 14
 TILING

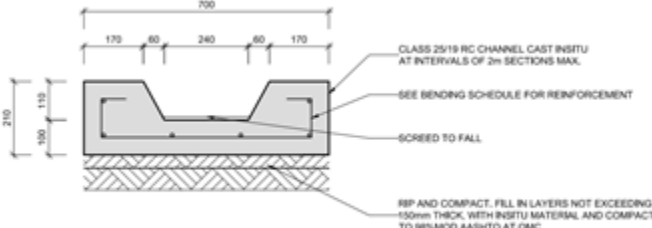
Item No	Quantity	Rate	Amount
<p><u>BILL NO 15</u></p>			
<p><u>PLUMBING AND DRAINAGE</u></p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p>			
<p><u>Wire gratings</u></p>			
<p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings</p>			
<p><u>Stormwater channels</u></p>			
<p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc, and disposal of surplus material on site</p>			
<p><u>Stainless steel basins, sinks, wash troughs, urinals, etc</u></p>			
<p>Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)</p>			
<p>Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)</p>			
<p>Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)</p>			
<p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable</p>			
<p><u>Sealing of edges</u></p>			
<p>Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone</p>			
<p>Carried to Collection</p>		ZK	
<p>Bill No. 15 PLUMBING AND DRAINAGE</p>			

Item No	Quantity	Rate	Amount
<p><u>uPVC pipes and fittings</u></p> <p>Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings</p> <p>Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings</p> <p><u>uPVC pressure pipes and fittings</u></p> <p>Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings</p> <p>Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints</p> <p><u>High density polyethylene (HDPE) pipes and fittings</u></p> <p>Pipes shall be type IV and of the class specified with "Plasson" or "Alprene" or other similar and approved compression fittings</p> <p><u>"Polycop" polypropylene pipes</u></p> <p>Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with heat welded thermoplastic or where so described "Polylock" or other similar and approved compression fittings</p> <p>Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions</p> <p style="text-align: right;">Carried to Collection</p> <p>Bill No. 15 PLUMBING AND DRAINAGE</p>			ZK

Item No	Quantity	Rate	Amount
<p><u>Copper pipes</u></p> <p>Pipes shall be hard drawn and half-hard "Maksal" or other similar and approved 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 "Cobra Watertech" or other similar and approved type. Capillary solder fittings shall comply with ISO 2016</p> <p>Copper pipes are to be installed in accordance with the latest revision of the Code of Practice for Copper Plumbing soldering techniques. Flux, solder, etc to be strictly in accordance with the manufacturer's requirements with special attention to copper flux composition</p>			
<p><u>Reducing fittings</u></p> <p>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</p>			
<p><u>Fixing of pipes</u></p> <p>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</p>			
<p><u>Paper wrapping to pipes</u></p> <p>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</p>			
<p>Carried to Collection</p>		<p>ZK</p>	
<p>Bill No. 15 PLUMBING AND DRAINAGE</p>			

Item No	Quantity	Rate	Amount
<p><u>Disinfection of water pipework</u></p> <p>Water pipework is to be disinfected at completion in accordance with SABS 1200L (provision for disinfection elsewhere)</p> <p><u>"Densyl" or other similar and approved petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd.</u></p> <p>Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with sufficient overlaps</p> <p>Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, "Layflat" sheeting, securing of same, etc</p> <p>Prices for wrapping of pipes shall include for all work as described to couplings in the length</p> <p><u>Laying, backfilling, bedding, etc of pipes</u></p> <p>Pipes shall be laid and bedded in accordance with manufacturers' instructions and trenches shall be carefully backfilled</p>			
<p>Carried to Collection</p>		<p>ZK</p>	
<p>Bill No. 15 PLUMBING AND DRAINAGE</p>			

Item No		Quantity	Rate	Amount
	<p>Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following: SABS 1200L : Medium-pressure pipelines SABS 1200LD : Sewers SABS 1200LE : Stormwater drainage</p> <p>Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB : Earthworks (Pipe trenches)</p> <p>Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB : Bedding (Pipes)</p> <p>Unless otherwise described bedding of rigid pipes shall be Class B bedding</p> <p><u>General</u></p> <p>Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc are given separately)</p> <p>Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends</p> <p>Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 93 % Mod AASHTO density and disposal of surplus material on site</p> <p>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)</p>			
	Carried to Collection		ZK	
	<p>Bill No. 15 PLUMBING AND DRAINAGE</p>			

Item No	Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured)	Quantity	Rate	Amount
	<p><u>As-built drawings</u></p> <p>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)</p>			
	<p><u>STORMWATER DISPOSAL</u></p>			
A	<p>25/19Mpa Concrete in-situ stormwater channel overall size 700mm wide x 210mm thick with channel average 300mm wide x 110mm deep formed there-in, including smooth finishing, all earthworks and 95% Mod AASHTO compaction below (steel reinforcement elsewhere measured)</p>			
	 <p><u>TYPICAL DETAIL - STORMWATER CHANNEL</u></p>	m	83	
B	<p>Extra over last item for forming 90 degrees angle</p>	No	6	
	<p><u>Heavy duty (400 kPa) uPVC sewer and drain pipes in and including trenches as described, backfill in layers of 150mm thick and ramming</u></p>			
	<p><u>SOIL AND WASTE DRAINS</u></p>			
	<p>Carried to Collection</p>		ZK	
<p>Bill No. 15 PLUMBING AND DRAINAGE</p>				

Item No		Quantity	Rate	Amount
	<u>Heavy Duty solid wall uPVC pipes for drainage and sewerage in accordance with SABS 791 Class 34 with minimum hoop stiffness of 400 kPa, joined with double-up type rubber ring seal according to SABS 974 (excavations and backfilling elsewhere measured)</u>			
C	110 mm Diameter socketed drain pipes, including short lengths, jointed as described and placed vertically in ground in ramps to cleaning eyes	m	6	
D	110 mm Diameter socketed drain pipes, including short lengths, jointed as described and laid to even falls in ground (excavation and backfill elsewhere measured)	m	153	
E	160 mm Diameter socketed drain pipes, including short lengths, jointed as described and laid to even falls in ground (excavation and backfill elsewhere measured)	m	12	
	<u>Extra on piping for injection moulded uPVC fittings with spigot & socket couplings</u>			
F	110 mm Bend	No	11	
G	110 mm Junction	No	6	
H	110 mm Junction with inspection eye	No	6	
I	110 mm Diameter PVC overflow gully not exceeding 1 m deep to invert with outlet jointed to PVC pipe with 450 x 450mm single seal type 14B Manhole cover set on and encased in concrete all as described	No	3	
	Carried to Collection			ZK
	Bill No. 15 PLUMBING AND DRAINAGE			

Item No		Quantity	Rate	Amount
J	110 mm Diameter approved PVC stub stack not exceeding 1 m deep at overflow with outlet jointed to PVC drain pipe, formed of necessary length of pipe complete with air valve, fixed to wall with connections to two not exceeding 50mm and two 110mm diameter pipe, fixed in position complete with all couplings, fittings, etc, including excavation, filling in and ramming	No	8	
K	160 mm Bend	No	2	
<u>Inspection Chambers</u>				
L	Excavate for and build inspection chamber size internally 1,2 m diameter x not exceeding 1 m deep to invert with 150 mm thick concrete (Class 30 MPa) sides rendered smooth internally in 1:3 waterproofed cement mortar on a 150 mm concrete (Class 35 MPa) bottom projecting 150 mm all round and benched with concrete (Class 35 MPa) dished down to and including necessary 110 mm diameter half-section glazed earthenware channels with bends, junctions and reducers, jointed as described and embedded to even falls and jointed to drain pipes, with benching finished smooth in 1:3 waterproofed cement mortar; with a reinforced concrete (Class 35 MPa) slab over (slab 150mm thick minimum and 200mm thick around cover) with rebated perforation for manhole cover, finished smooth on exposed faces with 20 mm untinted granolithic with salient angles rounded and fitted with, 550 mm diameter type 2A manhole cover and frame <u>(measured elsewhere)</u> and coated with preservative solution with frame bedded in cement mortar in rebate of concrete kerb and cover set in tallow, including all necessary formwork, reinforcement (total mass 28 kg) with holes through sides for connecting to and leaving watertight around three 110 mm diameter pipes, filling in and ramming	No		
M	Ditto, exceeding 1m and not exceeding 2m deep	No	1	
Carried to Collection				ZK
Bill No. 15 PLUMBING AND DRAINAGE				

Item No		Quantity	Rate	Amount
	<u>Manhole covers</u>			
N	Saint Gobain Pipelines South Africa (Besaans-du Plessis foundries) Type Z 600-D heavy duty ductile iron circular road manhole cover with frame, cast in concrete (concrete elsewhere measured)	No	1	
	<u>Sundries</u>			
O	100 mm Cast iron "A.B.C." cleaning eye as Besaans-du Plessis No F7908 or other approved, with the letters "C.E." formed therein, jointed to 110 mm diameter PVC drain pipe and encased in 350 x 350 x 150mm concrete (Class 20 MPa) block finished smooth on all exposed faces and all salient angles rounded	No	2	
P	Carefully connect new 110mm uPVC sewer pipe to existing manhole not exceeding 2m deep, leaving all completely watertight	No	16	
	<u>Testing</u>			
Q	Allow for testing the drains as described	Item		
	Carried to Collection		ZK	
	Bill No. 15 PLUMBING AND DRAINAGE			

Item No	<u>SANITARY PLUMBING</u>	Quantity	Rate	Amount
	<u>Sanitary Fittings</u>			
	<u>Note : All rates for sanitary fittings should include for silicone around all edges between plastered or tiled wall and fitting</u>			
	<u>Franke or other similar approved Grade 304 (18/10) Stainless steel fittings</u>			
R	Franke/Citimetal-C8 or similar approved stainless steel single end bowl sink size 860mm long x 485 mm wide, bowl fitted with Cobra No 309 anti-theft plug and matching chromium-plated waste union, including fixing in position in concrete work top (elsewhere)	No		
S	Economy Model ET101 stainless steel single bowl wash trough size 540 x 430 x 348mm, including fixing in position on and including one pair of stainless steel brackets (Code 300322) plugged to wall	No	6	
T	Franke Kitchen Systems (t/a Citimetal) grade 304 (18/10) stainless steel model P2 double pot sink size 1850mm wide x 650mm with 150mm high integral splashback at rear, 50mm turndown with beaded edge to remaining sides and two centre bowls and perforations for 40mm wastes ,the underside of the unit sprayed with vermin proof bitumastic sound deadening and supported on 30 x 30 x 3mm painted mild steel angle framework with galvanised mild steel backing sheet and set of 38mm diameter stainless steel detachable legs with adjustable flanged foot pieces, and fitted with stainless steel solid undershelf 650mm wide	No		
	Carried to Collection		ZK	
	Bill No. 15 PLUMBING AND DRAINAGE			

**BK1073 - Katete Forestry Phase 1a
Dormitory & Ablutions
Schedule of Quantities**

Item No		Quantity	Rate	Amount
	<u>Vitreous china</u>			
U	White Betta Trio counter top basin size 220 x 460 x 460mm (supplier code TR0008A) installed in timber fitting (timber fitting, basin waste, trap, taps, etc. elsewhere measured)	No	7	
V	White Lecico Atlas wall hung basin size 558 x 463 x 187mm (supplier code LEC-ATBAS1) installed on and including approved brackets (basin waste, trap, taps, etc. elsewhere measured)	No	1	
W	WC suite comprising the following : - White Betta Rapido RT0208A open rim top flush 770 x 365 x 400mm pan (supplier code BET-RT0208A) - Parker Shires Ndlovu low level 9l black duct cistern with top lifting chain, flushing remote control and low level duct flush pipe (supplier code PNY-410-62045) - Bemis 7200AR technoplast hard wearing double flap white toilet seat and hinges (supplier code PNY-SA1-411-65405)	No	7	
X	Low level WC suite comprising Vaal Protea Paraplegic 90° No 7502 or other similar and approved white vitreous china pan with "P" or "S" trap and No 1921 De Luxe heavy duty plastic seat and flap, matching 9 litre cistern code 710536 complete with lid and fitments with 40 mm diameter PVC bent flush pipe, purpose made chromium plated side flush lever mounted on wall and fixing pan in position on tiled concrete floor and jointing closet to soil pipe as described, fixing cistern with concealed brackets to tiled wall and jointing flush pipe to cistern and pan complete	No	1	
	Carried to Collection			ZK
	Bill No. 15 PLUMBING AND DRAINAGE			

**BK1073 - Katete Forestry Phase 1a
Dormitory & Ablutions
Schedule of Quantities**

Item No		Quantity	Rate	Amount
Y	Urinal comprising the following : - 315 x 275 x 415mm White Vaal Flatback TI wall hung urinal with 38mm chromium plated domical grating and top inlet spreader, fixed to and including mhanger brackets according to manufacturer's instructions (supplier code VAA-705326WH) - Urinal fittings for flatback urinal (supplier code COB-7053Z000) - 40mm approved white PVC bottle trap (supplier code VIE-119270) - Cobra Junior Flushmaster exposed chromium plated flush valve (supplier code COB-FJ6-000) - 215mm x 15mm Cobra chromium plated offset flush pipe	No	4	
	<u>uPVC pipes as described</u>			
Z	40 mm Diameter socketed soil, waste, vent or anti-syphon pipe, including short lengths, jointed as described and fixed to walls, chases, etc	m	14	
AA	40 mm Ditto, laid to even falls in ground or earth filling below solid floors	m	62	
AB	110 mm Ditto, fixed to walls	m	20	
AC	110 mm Ditto, laid to even falls in ground or earth filling below solid floors	m	16	
	<u>Extra on piping for</u>			
AD	40 mm Bend	No	32	
AE	40 mm Bend with cleaning eye	No	16	
AF	40 mm Junction with cleaning eye	No	8	
	Carried to Collection			ZK
	Bill No. 15 PLUMBING AND DRAINAGE			

**BK1073 - Katete Forestry Phase 1a
Dormitory & Ablutions
Schedule of Quantities**

Item No			Quantity	Rate	Amount
AG	110 mm Pan connector	No	8		
AH	110 mm Bend	No	12		
AI	110 mm Bend with cleaning eye	No	8		
AJ	110 mm Junction	No	8		
<u>WASTE UNIONS ETC</u>					
<u>"Cobra Watertech" or other similar approved</u>					
AK	32mm Chrome plated basin waste union with plug and stay and polymer black nut (Code COB-303-32)	No	8		
AL	40mm Chromium plated wash trough waste union with plug and stay (Code: 317-40).	No	6		
<u>Traps, etc including joints to PVC waste pipes</u>					
<u>Rubber traps</u>					
AM	40mm Butyl deep seal "P" or "S" trap.	No			
<u>PVC Traps</u>					
AN	32 mm Viega or similar and approved white PVC bottle trap with cleaning eye and joint to waste union (Code 5725/108694)	No	8		
AO	40 mm Approved white PVC P-trap (wash trough)	No	6		
<u>Brass traps</u>					
<u>"Cobra Watertech" or similar approved</u>					
AP	40mm 373 RB shower trap with chromium plated grating	No	10		
Carried to Collection					ZK
Bill No. 15 PLUMBING AND DRAINAGE					

Item No		Quantity	Rate	Amount
	<u>Stainless steel traps</u>			
	<u>"Herbish" or other similar approved floor trap</u>			
AQ	150 x 150mm HB 125 VNW 50mm stainless steel floor drain outlet, complete with installation in concrete floor	No		
	<u>WATER SUPPLIES</u>			
	Where described as fixed to walls, chases, etc., the pipe shall be covered by not less than 15mm thick plaster			
	<u>Copper (hard drawn class O) pipes as described</u>			
AR	15 mm Diameter water pipe, including short lengths jointed as described and fixed to walls, chases, etc	m	104	
AS	22 mm Diameter water pipe, including short lengths jointed as described and fixed to walls, chases, etc	m	104	
	<u>Extra on copper piping for</u>			
AT	Approved Denso or other similar and approved wrapping around not exceeding 42mm copper pipe (pipe elsewhere measured)	m	112	
AU	15 mm Fittings	No	96	
AV	22 mm Fittings	No	66	
	<u>Taps, valves, etc including joints to PVC, steel or copper pipes and necessary flanges, adaptors, etc</u>			
AW	50mm Approved gate valve in uPVC pipe	No	1	
AX	Cobra Star 128-15 chromium plated underwall stop cock to shower	No	20	
	Carried to Collection			ZK
	Bill No. 15 PLUMBING AND DRAINAGE			

**BK1073 - Katete Forestry Phase 1a
Dormitory & Ablutions
Schedule of Quantities**

Item No			Quantity	Rate	Amount
AY	Cobra 166/041 chromium plated wall mounted mixer for wash trough	No	6		
AZ	Schloesser Universal 7105 or other similar and approved chromium plated angle valve with cover plate, including approved flexible connector pipe	No	24		
BA	15mm Walker Crossweiler or other similar and approved chromium plated pillar lever tap (paraplegic basin)	No	2		
BB	15mm Cachet Dalby 99001DA chromium plated pillar tap (basin)	No	14		
	<u>"Cobra Watertech" or other similar approved</u>				
BC	15mm 232/350CP angle regulating valve and connection pipe	No			
BD	15 mm Cobra KP2.61 "Vandalmaster" shower rose	No	10		
BE	Chromium plated flushpipe FJT5.5	No			
	<u>EXTERNAL WATER RETICULATION</u>				
	<u>Note:</u>				
	All Water supplies are to be to the Consulting Engineer's Specifications and prices are to allow there for				
	<u>HDPE Class 10 pipes</u>				
BF	50mm Diameter water pipe including short lengths jointed as described and laid in ground	m	133		
BG	50mm Diameter water pipe including short lengths jointed as described and fixed at not exceeding 500mm centres to existing steel structure to Engineer's approval	m	3		
	Carried to Collection			ZK	
	Bill No. 15 PLUMBING AND DRAINAGE				

Item No			Quantity	Rate	Amount
	<u>Extra on HDPE piping for the following fittings</u>				
BH	50mm Bend or elbow	No	3		
BI	50mm Tee	No	3		
BJ	50 x 20mm Reducer	No	2		
	<u>Joints to copper pipes</u>				
BK	Joint of 25mm HDPE to 20mm galvanised mild steel pipe, including all necessary fittings and leaving completely watertight	No	1		
	<u>Galvanised mild steel pipes</u>				
BL	20mm Pipe	m	3		
	<u>Extra on galvanised mild steel pipes</u>				
BM	20mm Bend	No	2		
	<u>Taps, valves, etc.</u>				
BN	Cobra 108LK-20 or other similar and approved rough brass hose bibtap	No	2		
BO	Cobra 121 or other similar and approved rough brass FxF stoptap as isolating valve to 50mm HDPE pipe, including all necessary fittings	No	5		
BP	1,5m Long x 110mm diameter uPVC pipe planted in ground approximately 750mm deep, filled in with Class 10 mass concrete and painted with two coats approved PVA, including all necessary earthworks	No	2		
	Carried to Collection			ZK	
	Bill No. 15 PLUMBING AND DRAINAGE				

Item No		Quantity	Rate	Amount
	<u>FIRE SERVICE</u>			
BQ	Approved 4,5 kg "all purpose" dry powder fire extinguisher with bracket fixed to and including 25 mm wrot Meranti backboard size 250 mm wide x 600 mm high, rounded on all salient angles, varnished and plugged to wall, including placing fire extinguisher in position with full charge ready for use	No 2		
BR	Approved 9 kg ditto	No 1		
	Carried to Collection			ZK
	Bill No. 15 PLUMBING AND DRAINAGE			

Bill No. 15

PLUMBING AND DRAINAGE

COLLECTION

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Carried to Summary

ZK

Bill No. 15

PLUMBING AND DRAINAGE

Item No	<u>BILL NO 16</u>	Quantity	Rate	Amount
	<u>GLAZING</u>			
	<u>GLASS</u>			
	<u>GLAZING TO STEEL</u>			
A	4mm "Pacific" obscure glass and glazing in steel sashes with putty in panes not exceeding 0,1 m ²	m2	1	
B	4mm Clear glazing glass and glazing in steel sashes with putty in panes not exceeding 0,1 m ²	m2	2	
	<u>Mirrors</u>			
C	6 mm Silvered float glass mirror size 450 x 600 mm high with two layers of building paper glued to back, formed of 6 mm float glass with bevelled and polished edges and mitred corners, holed for and screwed with and including four chromium-plated dome-capped screws to plugs in plastered or tiled wall	No	7	
D	6 mm Silvered float glass mirror size 300mm wide x 1,2m high with two layers of building paper glued to back, formed of 6 mm float glass with bevelled and polished edges and mitred corners, holed for and screwed with and including four chromium-plated dome-capped screws to plugs in plastered or tiled wall, and sealed along all edges with clear silicon	No	14	
	Carried to Summary		ZK	
	Bill No. 16 GLAZING			

Item No	<u>BILL NO 17</u>	Quantity	Rate	Amount
	<u>PAINTWORK</u>			
	For preambles see "Model Preambles for Trades"			
	<u>PAINTWORK, ETC TO NEW WORK ON</u>			
	<u>PAINTWORK ON PLASTER</u>			
	<u>Prepare and apply one coat alkali resistant plaster primer, stop with Mendall 90 or other similar approved stop and apply two coats eggshell enamel paint on:</u>			
A	Internal plastered walls	m2	713	
	<u>Prepare, apply one coat Peraseal or other similar approved and two coats Peralin Peraroll or other similar approved to :</u>			
	<u>Prepare, stop and prime with one coat approved plaster primer and paint two finishing coats approved Exterior Quality PVA paint as described to</u>			
B	External walls	m2	302	
C	Ditto, in foundations	m2	7	
D	General surfaces of fibre cement fascias and barge boards (provisional)	m2	14	
	<u>PAINTWORK ON METAL SURFACES</u>			
	Carried to Collection			
	Bill No. 17 PAINTWORK			ZK

Item No		Quantity	Rate	Amount
	<u>Spot priming defects in pre-primed surfaces with zinc phosphate or similar approved metal primer, one coat Plascon Merit or similar approved universal undercoat and two coats matt enamel paint on</u>			
E	General surfaces of steel fittings	m2	15	
F	Steel frame for insect screen not exceeding 150mm girth	m	244	
G	New additions to existing bunk beds not exceeding 150mm girth	m	139	
H	Small steel bars, rails, etc not exceeding 300 mm girth	m	192	
	<u>One coat zinc chromate or similar approved primer and two coats eggshell satin or similar approved enamel paint on</u>			
I	General surfaces of structural steelwork comprising elements not exceeding 20mm diameter	m2	268	
	<u>Prepare, remove storage oil with galvanised iron cleaner, rinse thoroughly with clean water, fill gaps as necessary with Duracryl or other similar approved and apply two coats Peralin Peraroll or other similar approved with a fine textured roller on:</u>			
J	Galvanised corrugated iron roof covering (Measured flat)	m2	26	
K	Galvanised Ziptek ceilings including cornices (measured flat) (Provisional)	m2	19	
	<u>PAINTWORK ON WOOD SURFACES WITH</u>			
	Carried to Collection			ZK
	Bill No. 17 PAINTWORK			

Item No		Quantity	Rate	Amount
	<u>Prepare, stop and apply one prime coat approved clear varnish thinned with 10 % spirits, two intermediate coats approved clear varnish and one final coat approved clear varnish to</u>			
L	General surfaces of timber fittings	m2	198	
M	Supawood drywalls	m2	30	
N	Frames not exceeding 150mm girth plugged to wall	m	4	
O	General surfaces of window frames plugged to wall	m	198	
	<u>Prepare, knot, prime with one coat pink wood primer, stop with Mendall 90 or other similar approved stop, apply one coat universal undercoat and two coats high gloss enamel paint on:</u>			
P	Doors	m2	133	
	<u>PAINTWORK, ETC TO PREVIOUSLY PAINTED WORK</u>			
	<u>PAINT ON METAL</u>			
	<u>Carefully wash down existing surface to be painted, and paint two coats eggshell satin or similar approved enamel paint on</u>			
Q	Underside of corrugated iron roof sheets	m2	220	
R	Existing frames of steel fittings not exceeding 150mm girth	m	193	
S	Existing steel door frames	m		
	Carried to Collection			ZK
	Bill No. 17 PAINTWORK			

Item No		Quantity	Rate	Amount
T	General surfaces of steel water tower	m2		
	<u>Thoroughly clean existing surface, removing all loose paint, prime surfaces with zinc phosphate metal primer where metal is exposed, and paint one coat universal undercoat and two coats Plascon Matt enamel paint (4x50 micron) or other similar and approved to on</u>			
	Carried to Collection		ZK	
	Bill No. 17 PAINTWORK			

Bill No. 17

PAINTWORK

COLLECTION

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Carried to Summary

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Bill No. 17
 PAINTWORK

Item No	<u>BILL NO 18</u>	Quantity	Rate	Amount
	<u>ELECTRICAL WORK</u>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	Tenderer should refer to the Specifications of the Electrical Engineer for the Electrical Work			
	<u>GENERALLY</u>			
	This Section of the Tender document was compiled by WML Consulting Engineers according to SABS 1200 and all contractual decisions and activities will be done by the project consultants according to SABS 1200.			
	The Tenderer shall indicate which Subcontractor will carry out the work in this section by having the schedule on the last page of this section completed by the Subcontractor's authorised person.			
	The Subcontractor carrying out the work in this section, will be regarded as a domestic subcontractor of the Main Contractor.			
A	Subtotal carried from page DE1 of attached Electrical Installation quantities	Item		
B	Allow for profit upon above if required	Item		
C	Allow for attendance as described	Item		
	Carried to Summary		ZK	
	Bill No. 18 ELECTRICAL INSTALLATION			

Bill No	<u>FINAL SUMMARY</u>	Page No	Amount
1	PRELIMINARIES	23	
2	ALTERATIONS	32	
3	EARTHWORKS	38	
4	CONCRETE, FORMWORK & REINFORCEMENT	43	
5	MASONRY	48	
6	WATERPROOFING	49	
7	ROOF COVERINGS	53	
8	CARPENTRY AND JOINERY	64	
9	CEILINGS, ETC.	69	
10	IRONMONGERY	77	
11	STRUCTURAL STEELWORK	81	
12	METALWORK	87	
13	PLASTERING	92	
14	TILING	95	
15	PLUMBING AND DRAINAGE	113	
16	GLAZING	114	
17	PAINTWORK	119	
	Carried Forward		ZK

Bill No	<u>FINAL SUMMARY</u>	Page No	Amount
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18	ELECTRICAL INSTALLATION	120	
	Provide the sum of sixty thousand Zambia Kwachas (ZK60 000) for contingencies to be used at the discretion of the Principal Agent and deducted in whole or in part if not required		ZK 60 000.00
	Sub Total		ZK
	VALUE ADDED TAX 16%		ZK
	Carried to Form of Tender		ZK