

T22/2021

VAAL UNIVERSITY OF TECHNOLOGY

**REFURBISHMENT OF KHAYALETHU RESIDENCE -
BILL OF QUANTITIES (BOQ)
PART A: SECTION 1 TO 3**

Item No		Quantity	Rate	Amount
	<p><u>SECTION 1</u></p> <p><u>BILL NO. 1</u></p> <p><u>PRELIMINARIES</u></p> <p><u>BUILDING AGREEMENT AND PRELIMINARIES</u></p> <p>The JBCC Series 2000 Principal Building Agreement (July 2007 edition) prepared by the Joint Building Contracts Committee, shall be the agreement, amended as hereinafter described</p> <p>The Preliminaries for use with the JBCC Series 2000 Principal Building Agreement (May 2005 edition) prepared by the Joint Building Contracts Committee, shall be deemed to be incorporated in these bills of quantities</p> <p>Contractors are referred to the above-mentioned documents for the full intent and meaning of each clause thereof</p> <p>These clauses are hereinafter referred to by clause number and heading only. Where standard clauses or alternatives are not entirely applicable to this contract such modifications, corrections or supplements as will apply are given under each relevant clause heading and such modifications, corrections or supplements shall take precedence notwithstanding anything contrary contained in the above-mentioned documents</p> <p>Where any item is not relevant to this specific contract such item is marked N/A, signifying "not applicable"</p> <p>Notwithstanding anything to the contrary contained in any of the contract documents including the Principal Building Agreement and the Preliminaries, the provision of the "Preliminaries" as hereinafter set forth shall prevail and shall take precedence</p>			
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	<p>Bill No. 1 Preliminaries and General Prepared by Takgalang Consulting</p>			

PREAMBLES FOR TRADES

The Model Preambles for Trades (2008 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claim arising from brevity of description of items fully described in the said Model Preambles for Trades will be entertained

Supplementary preambles to the Model Preambles covering clauses of a general nature, clauses pertaining to specific materials and amendments to clauses in the Model Preambles are incorporated in these bills of quantities to satisfy the requirements of this project

The contractor's prices for all items throughout these bills of quantities must take account of and include for all of the obligations, requirements and specifications given in the Model Preambles and in any supplementary preambles

GENERAL

If Alternative A as set out in clause B10.3 hereinafter is to be used for the adjustment of the preliminaries each item priced is to be allocated to one or more of the three categories "F", "T" or "V" as the case may be below such item, where "F" denotes a fixed amount (amount not to be varied), "T" denotes an amount variable in proportion to time and "V" denotes an amount variable in proportion to value

SECTION A - PRINCIPAL BUILDING AGREEMENT

Definitions (A1)

1 Definitions and interpretation (clause 1)

F:..... V:.....
T:.....

Item

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Objective and Preparation (A2 to A14)

2 Offer acceptance and performance (clause 2)

F:..... V:.....
T:.....

Item

3 Documents (clause 3)

F:..... V:.....
T:.....

Item

4 Design responsibility (clause 4)

F:..... V:.....
T:.....

Item

5 Employer's agents (clause 5)

F:..... V:.....
T:.....

Item

The principal agent shall:

- monitor and control progress and scheduling
- monitor all contract conditions, and
- coordinate the efforts of the employer's agents, the contractor and subcontractors

The powers conferred on the principal agent in terms of this clause and/or the exercising of these powers shall not be construed as removing or diminishing any of the obligations of the Contractor in terms of the Principal Building Agreement, whether financial, contractual or otherwise, nor shall the exercising of these powers create any privity of contract as between the Employer or his agents on the one part and the Contractor or subcontractors or suppliers on the other part

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The principal agent reserves the right to attend and participate in all contractor/subcontractor's meetings, to invite other employer's agents to attend such meetings at his discretion and to converse and chair any such meetings if the contractor is derelict in his duty in arranging such meetings to the degree of frequency and comprehensiveness dictated in the opinion of the project manager by the circumstances and exigencies of the construction process

6 Site representative (clause 6)

F:..... V:.....
T:.....

Item

7 Compliance with regulations (clause 7)

F:..... V:.....
T:.....

Item

8 Works risk (clause 8)

F:..... V:.....
T:.....

Item

9 Indemnities (clause 9)

F:..... V:.....
T:.....

Item

10 Works insurances (clause 10)

F:..... V:.....
T:.....

Item

11 Liability insurances (clause 11)

F:..... V:.....
T:.....

Item

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12 Effecting insurance (clause 12)

F:..... V:.....
T:.....

Item

13 NO CLAUSE

N/A

14 Security (clause 14)

F:..... V:.....
T:.....

Item

Execution (A15-A23)

15 Preparation for and execution of the works (clause 15)

F:..... V:.....
T:.....

Item

16 Access to the works (clause 16)

F:..... V:.....
T:.....

Item

17 Contract instructions (clause 17)

F:..... V:.....
T:.....

Item

18 Setting out of the works (clause 18)

F:..... V:.....
T:.....

Item

The contractor shall notify the principal agent if any encroachments of adjoining foundations, buildings, structures, pavements, boundaries, etc exist in order that the necessary arrangements may be made for the rectification of any such encroachments

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19 Assignment (clause 19)

F:..... V:.....
T:.....

The contractor shall not cede his rights or delegate his obligations in terms of this agreement unless specifically called for by the employer

Item

20 Nominated subcontractors (clause 20)

F:..... V:.....
T:.....

Item

21 Selected subcontractors (clause 21)

F:..... V:.....
T:.....

Item

Written proof is required from subcontract tenderers at tendering that they can meet the JBCC Selected Subcontract Agreement or other tender agreements and provide security in terms of the agreement. If the above is not provided the tender may not be accepted

All amounts allowed under Provisional Amounts are intended to be awarded to Selected Subcontractors

22 Employer's Direct Contractors (clause 22)

F:..... V:.....
T:.....

Item

23 Contractor's Domestic Sub-Contractors (Clause 23)

F:..... V:.....
T:.....

Item

Completion (A24-A30)

24 Practical completion (clause 24)

F:..... V:.....
T:.....

Item

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25 Works completion (clause 25)

F:..... V:.....
T:.....

Item

26 Final completion (clause 26)

F:..... V:.....
T:.....

Item

27 Latent defects liability period (clause 27)

F:..... V:.....
T:.....

Item

28 Sectional completion (clause 28)

F:..... V:.....
T:.....

Item

29 Revision of date of practical completion (clause 29)

F:..... V:.....
T:.....

Item

The removal and replacement of materials and/or workmanship that do not conform to specification or drawings shall not constitute grounds for an extension of the construction period nor for an adjustment to the contract sum (clause 29.3)

30 Penalty for non-completion (clause 30)

F:..... V:.....
T:.....

Item

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Payment (A31 - A35)

31 Interim payment to the contractor (clause 31)

F:..... V:.....
T:.....

Item

32 Adjustment to the contract value (clause 32)

F:..... V:.....
T:.....

Item

Where prices are submitted by the contractor or nominated/selected subcontractors during the progress of the works in respect of contract instructions or in regard to a claim under the terms of the contract and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the final certificate, it will be in writing

33 Recovery of expense and loss (clause 33)

F:..... V:.....
T:.....

Item

34 Final account and final payment (clause 34)

F:..... V:.....
T:.....

Item

The employer shall not pay any interest on amounts payable to the contractor for one hundred and forty two (142) days after the date of issue of the certificate of practical completion

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The employer shall, however, pay interest to the contractor at the rate stipulated in clause 34.11 on any amounts payable to the contractor more than one hundred and forty two (142) days after the date of issue of the certificate of practical completion but only for such period as the settlement of the final account is delayed by the non-performance of the principal agent or the employer or his agents. In evaluating non-performance for purposes of this clause a reasonable time shall be allowed to the employer or his agents to respond to any matter brought to his/their attention and which may affect the settlement of the final account

35 Payment to other parties (clause 35)

F:..... V:.....
T:.....

Item

Cancellation (A36-A39)

36 Cancellation by employer - contractor's default (clause 36)

F:..... V:.....
T:.....

Item

37 Cancellation by employer - loss and damage (clause 37)

F:..... V:.....
T:.....

Item

38 Cancellation by contractor - employer's default (clause 38)

F:..... V:.....
T:.....

Item

39 Cancellation - cessation of the works (clause 39)

F:..... V:.....
T:.....

Item

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Dispute (A40)

40 Dispute Settlement (clause 40)

F:..... V:.....
T:.....

Item

Substitute Provisions (A41)

41 State clauses (Clause 41)

F:..... V:.....
T:.....

Item

Information necessary for the completion of those clauses contained in the schedule which are necessary for tender purposes is given hereunder

THE SCHEDULE

Information necessary for completion of those clauses contained in the schedule which are necessary for tender purposes is given hereunder

42 Pre-tender information (clause 42)

F:..... V:.....
T:.....

Item

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42.1 CONTRACTING AND OTHER PARTIES

42.1.1

Employer:

Vaal University of Technology

Postal address:

Private Bag X021
Vanderbijlpark
1911

Tel : 016 950 9000

Physical Address:

Andries Potgieter Blvd
Vanderbijlpark
1911

42.1.2

Principal Agent and Architect:

Organic Architects

Physical Address:

Unit G002 Ground Floor
271 Kent Avenue
Randburg
2194

Tel: 011 886 2171

Fax: 086 613 6068

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42.1.3

Quantity Surveyor:

Takgalang Consulting

Postal address:

P O Box 10569
Centurion
0046

Physical Address:

Suite 16C
Heuwilsig Office Park
6763 Seedcracker Street
Heuwilsig
0157

Tel (012) 656 8179

Fax (012) 656 8186

42.1.4

Electrical Engineer:

Lyon Vennote Partners

Postal address:

P.O. Box 3925
Vanderbijlpark
1900

Tel 016 - 981 6270

Fax 016 - 933 0277

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42.2 CONTRACT DETAILS

42.2.1 Works Description:
Refurbishment of Kayaletu Student Residence in
Vanderbijlpark Campus

42.2.2 Site Description: Four storey building with One
hundred and Twenty (120) single bedrooms, Eight (8)
combined Kitchens and lounges and Eight (8)
bathrooms

42.2.3 Work or installations by direct contractors:

N/A

42.2.4 This agreement is for a government contract
where there are specific options that are
applicable to a **State** organ only

Yes

42.2.5 Date on which possession of the site is intended
to be given: **TBA**

42.2.6 Period for the commencement of the works after
the contractor takes posse

TBA

42.2.7 For the works **as a whole**. Intended date of
practical completion and the penalty per
calendar day

Four (4) Months after contractual commencement date

0.05% of contract amount per calendar day
Penalty Amount

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42.2.8 For the works in **sections**: Intended date of practical completion and the penalty per calendar day

N/A

42.2.9 The **law** applicable to this **agreement** shall be that of

South Africa (country)

42.3 INSURANCES

42.3.1 Contract works insurance to be effected by:

Contractor:

For the Sum of R Contract Amount + 10.00 %

With a deductible of - to be determined by the contractor

42.3.2 Supplementary insurance is required

No

42.3.3 Public liability insurance to be effected by:

Contractor:

For the Sum of R 1 000 000-00

With a deductible of - to be determined by the contractor

42.4 DOCUMENTS

42.4.1 Waivers of **contractors lien** or right of continuing possession is required

Yes

42.4.2 Number of construction document copies to be supplied to the **contractor** free of charge:

3 Number of

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- 42.4.3 **Bills of Quantities/Lump sum document**
schedule of rates drawn up in accordance with:

"Standard System of Measuring Builders' Work"
- 42.4.4 On acceptance of the tender the bills of
quantities/lump sum document is to be
submitted within **working days**

*The priced bills of quantities must be handed in with the
tender*
- 42.4.5 JBCC Engineering General Conditions are to be
included in the **contract documents:**
No
- 42.4.6 The contract value is to be adjusted using
escalation adjustment indices

N/A
Where **JBCC CPAP** is to be used
Base Month N/A
- 42.4.7 Details of changes made to the provision of
JBCC standard documentation:

SECTION B: PRELIMINARIES

Definitions and interpretation (B1)

43 Definition and interpretation (B1.1 - B1.4.6)

F:..... V:.....
T:.....

Item

Documents (B2)

44 Checking of documents (B2.1)

F:..... V:.....
T:.....

Item

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45	Provisional bills of quantities (B2.2)			
	F:..... V:..... T:.....	N/A		
46	Availability of construction documentation (B2.3)			
	F:..... V:..... T:.....	Item		
47	Interests of agents (B2.4)			
	F:..... V:..... T:.....	Item		
48	Priced documents (B2.5)			
	F:..... V:..... T:.....	Item		
49	Tender submission (B2.6)			
	F:..... V:..... T:.....	Item		
	<u>The site (B3)</u>			
50	Defined works area (B3.1)			
	F:..... V:..... T:.....	Item		
51	Geotechnical investigation (B3.2)			
	F:..... V:..... T:.....	Item		
52	Inspection of the site (B3.3)			
	F:..... V:..... T:.....	Item		
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Existing premises occupied (B3.4)

F:..... V:.....
T:.....

Previous work - dimensional accuracy (B3.5)

F:..... V:.....
T:.....

Previous work - defects (B3.6)

F:..... V:.....
T:.....

53 Services - known (B3.7)

F:..... V:.....
T:.....

Item

54 Services - unknown (B3.8)

F:..... V:.....
T:.....

Item

55 Protection of trees etc (B3.9)

F:..... V:.....
T:.....

Item

56 Articles of value (B3.10)

F:..... V:.....
T:.....

Item

57 Inspection of adjoining properties etc (B3.11)

F:..... V:.....
T:.....

Item

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Management of contract (B4)

58 Management of the works (B4.1)

F:..... V:.....
T:.....

Item

59 Programme for the works (B4.2)

F:..... V:.....
T:.....

Item

60 Progress meetings (B4.3)

F:..... V:.....
T:.....

Item

61 Technical meetings (B4.4)

F:..... V:.....
T:.....

Item

62 Labour and Plant records (B4.5)

F:..... V:.....
T:.....

Item

**Samples, Shop Drawings and Manufacturer's
Instructions (B5)**

63 Samples of materials (B5.1)

F:..... V:.....
T:.....

Item

64 Workmanship samples (B5.2)

F:..... V:.....
T:.....

Item

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65	Shop drawings (B5.3) F:..... V:..... T:.....	Item	
66	Compliance with Manufacturer's Instructions (B5.4) F:..... V:..... T:.....	Item	
<u>Temporary works and plant (B6)</u>			
67	Deposits and fees (B6.1) F:..... V:..... T:.....	Item	
68	Enclosure of the works (B6.2) F:..... V:..... T:.....	Item	
69	Advertising (B6.3) F:..... V:..... T:.....	Item	
70	Plant, equipment, sheds and offices (B6.4) F:..... V:..... T:.....	Item	
71	Main notice board (B6.5) F:..... V:..... T:.....	N/A	
72	Subcontractors' notice board (B6.6) F:..... V:..... T:.....	N/A	
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Temporary services (B7)

73 Location (B7.1)

F:..... V:.....
T:.....

Item

74 Water (B7.2)

Option [A] shall apply

F:..... V:.....
T:.....

Item

75 Electricity (B7.3)

Option [A] shall apply

F:..... V:.....
T:.....

Item

76 Telecommunication facilities (B7.4)

F:..... V:.....
T:.....

Item

77 Ablution facilities (B7.5)

Option [A] shall apply

F:..... V:.....
T:.....

Item

Prime cost amounts (B8)

78 Responsibility for prime cost amounts (B8.1)

F:..... V:.....
T:.....

Item

Attendance on N/S Subcontractors (B9)

79 General attendance (B9.1)

F:..... V:.....
T:.....

Item

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80 Special attendance (B9.2)

F:..... V:.....
T:.....

Item

81 Commissioning - Fuel, water and power (B9.3)

F:..... V:.....
T:.....

Item

Financial aspects (B10)

Statutory taxes, duties and levies (B10.1)

F:..... V:.....
T:.....

Item

82 Payment of preliminaries (B10.2)
Option [B] shall apply

F:..... V:.....
T:.....

Item

83 Adjustment of preliminaries (B10.3)
Option [A] shall apply

F:..... V:.....
T:.....

Item

84 Payment certificate cash flow (B10.4)

F:..... V:.....
T:.....

Item

General (B11)

85 Protection of works (B11.1)

F:..... V:.....
T:.....

Item

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86	Protection/isolation of existing/sectionally occupied works (B11.2)			
	F:..... V:..... T:.....	N/A		
87	Security of the Works (B11.3)			
	F:..... V:..... T:.....	Item		
88	Notice before covering work (B11.4)			
	F:..... V:..... T:.....	Item		
89	Disturbance (B11.5)			
	F:..... V:..... T:.....	Item		
90	Environmental Disturbance (B11.6)			
	F:..... V:..... T:.....	Item		
91	Works cleaning and clearing (B11.7)			
	F:..... V:..... T:.....	Item		
92	Vermin (B11.8)			
	F:..... V:..... T:.....	Item		
93	Overhand work (B11.9)			
	F:..... V:..... T:.....	Item		
94	Instruction manuals and guarantees (B11.10)			
	F:..... V:..... T:.....	Item		
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95 As built information (B11.11)
F:..... V:.....
T:.....

Item

96 Tenant Installations (B11.12)
F:..... V:.....
T:.....

Item

Schedule of variables (B12)

97 Pre-tender information (B12.1)
F:..... V:.....
T:.....

Item

12.1.1 Provisional bills of quantities (B2.2)
The quantities are provisional: No

12.1.2 Availability of construction documentation (B2.3)
Construction documentation is not complete No

12.1.3 Interest of agents (B2.4)

12.1.4 Defined works area (B3.1)

12.1.5 Geotechnical investigation (B3.2)
N/A

12.1.6 Existing premises occupied (B3.4)

12.1.7 Previous work - dimensional accuracy (B3.4)

12.1.8 Previous work - defects (B3.5)

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<p>12.1.9 Services - known (B3.7)</p>				
<p>12.1.10 Protection of trees (B3.9)</p> <p style="padding-left: 20px;">All trees should be protected and only on instruction of the Principal Agent may any trees be removed</p>				
<p>12.1.11 Inspection of adjoining properties (B3.11)</p>				
<p>12.1.12 Enclosure of the works (B6.2)</p>				
<p>12.1.13 Offices (B6.4.3)</p> <p style="padding-left: 20px;">An office for the clerk of works should be provided</p>				
<p>12.1.14 Main notice board (B6.5)</p>	<i>No</i>			
<p>12.1.15 Subcontractors notice board (B6.6)</p> <p style="padding-left: 20px;">A notice board is required</p>	<i>No</i>			
<p>12.1.16 Water (B7.2)</p> <p style="padding-left: 20px;">Alternative Selected: A</p>				
<p>12.1.17 Electricity (B7.3)</p> <p style="padding-left: 20px;">Alternative selected: A</p>				
<p>12.1.18 Telecommunications (B7.4)</p>				
<p>12.1.19 Ablution facilities (B7.5)</p> <p style="padding-left: 20px;">Alternative selected: A</p>				
<p>12.1.20 Protection of existing/sectionally occupied works (B11.2)</p>				
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12.1.21 Special attendance (B9.2)

Subcontractor (1) details:

N/A

12.1.22 Protection of the works (B11.1)

N/A

12.1.23 Disturbance (B11.5)

N/A

12.1.24 Environmental Disturbance (B11.6)

N/A

Post tender information (B12.2)

12.2.1 Payment of preliminaries

Alternative selected: B

12.2.2 Adjustment of preliminaries

Alternative selected: A

12.2.3 Additional agreed preliminaries items

N/A

SECTION C: SPECIFIC PRELIMINARIES

Any special items to meet the particular circumstances of a specific project are embodied in this section. Where required for an aspect of the works to be executed according to a design by a consulting engineer, a recital of the headings to the individual clauses of the JBCC Engineering General Conditions are included

98 **Site instructions**

Instructions issued on site are to be recorded in triplicate in a site instruction book which is to be maintained on site by the contractor

F: V:.....
T:.....

Item

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99	<p>Black economic empowerment and training</p> <p>F:..... V:..... T:.....</p>	Item	
100	<p>Proprietary branded products</p> <p>F:..... V:..... T:.....</p>	Item	
101	<p>Testing of flat roof waterproofing for watertightness</p> <p>Flat roof waterproof areas shall be prepared with small sand dykes around them of a size and enclosing an area approved by the principal agent, flooded with water and kept "ponded" for at least 36 hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing</p> <p>F:..... V:..... T:.....</p> <p>The contractor shall take delivery of, handle, store, use, apply and/or fix all proprietary branded products in strict accordance with the manufacturers' instructions after consultation with the manufacturer's authorised representative</p>	Item	
102	<p>Contract instructions</p> <p>F:..... V:..... T:.....</p> <p>Contract instructions issued on site are to be recorded in triplicate in a contract instruction book which is to be supplied and maintained on site by the contractor</p>	Item	
103	<p>Labour record</p> <p>F:..... V:..... T:.....</p>	Item	
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104	<p>At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number and descriptions of tradesmen and labourers employed by him and all subcontractors on the works each day of that week</p> <p>Plant record</p> <p>F:..... V:..... T:.....</p>	Item		
105	<p>At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools used on the works each day of that week</p> <p>Guarantees</p> <p>F:..... V:..... T:.....</p> <p>Where guarantees are called for, the contractor shall obtain a written guarantee, addressed to the employer, from the firm supplying the materials and/or doing the work and shall deliver same to the principal agent on the certified completion of the contract. The guarantee shall state that workmanship, materials and installation are guaranteed for a specified period from the date of certified completion of the contract, and that any defects that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice from the principal agent to do so. This guarantee will not be enforced if the work is damaged by defects in the construction of the building in which case the responsibility for replacement shall rest entirely with the contractor. The principal agent shall be the sole judge of the cause responsible for defects in the work and his decision shall be final and binding in terms of clause 40.2 of the agreement</p>	Item		
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106	<p>Overtime</p> <p>F:..... V:..... T:.....</p> <p>Should overtime be required to be worked for any reason whatsoever, the costs of such overtime are to be borne by the contractor unless the principal agent has specifically authorised, in writing, prior to execution thereof, that costs for such overtime are to be borne by the employer</p>	Item	
107	<p>Co-operation of contractor for cost management</p> <p>F:..... V:..... T:.....</p> <p>It is specifically agreed that the contractor accepts the obligation of assisting the professional consultants in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the final building cost does not exceed the budget. The quantity surveyor undertakes to make available to the contractor all budgetary allowances and cost assessments/reports to enable the proper procedures to be implemented and the contractor will attend all cost plan review and cost management meetings. The contractor undertakes to extend these procedures in regard to all subcontractors</p>	Item	
108	<p>Occupational Health and Safety Specification</p> <p>F:..... V:..... T:.....</p> <p>Any Principal Contractor entering into a contract with The Developer must achieve an acceptable level of Occupational Health and Safety performance. Refer to "Project Specification" and "Safety, Health and Environmental Evaluation Questionnaire" The contractor to comply with all provisions of the above and to be enforced on all selected and or other sub-contractors, as no claim afterwards will be entertained</p>	Item	
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<p>Bill No. 1 Preliminaries and General Prepared by Takgalang Consulting</p>			

109 Special scaffolding over railway line

F:..... V:.....
T:.....

Allow for special scaffolding over railway line including permits from railway Authority

SUMMARY OF CATEGORIES

Category : Fixed R.....

Category : Value R.....

Category : Time R.....

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Bill No. 1
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**KAYALETHU STUDENT RESIDENCE
FOR VAAL UNIVERSITY OF TECHNOLOGY**

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Preliminaries and General

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SECTION NO. 2

BILL NO.1

ALTERATIONS, ETC

PREAMBLES

The contractor is reverred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill

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Bill No. 1
Alterations (Provisional)
Prepared by
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SUPPLEMENTARY PREAMBLES

Abbreviated descriptions

Unless otherwise described any additional preambles and descriptions of items in the Bills following this Bill are to apply equally to this Bill in which abbreviated descriptions may be used

VISIT THE SITE

Tenderers are advised to visit the site and satisfy themselves as to the exact nature and extent of the work to be done. Claims due to the fact that the Tenderers have not visited the site shall not be entertained.

RATES FOR DEMOLITIONS

Rates for demolition work shall include for grubbing up concrete or stone foundations. Concrete surface beds and brick foundation walling and carting away. Material from the demolitions shall not be used as filling. Rates shall include for disconnecting and/ or sealing off electricity, water supply and sewerage. Allowance shall be made on demolitions of ceilings to clean ceiling voids of dust and including protection of adjacent properties from possible dust accumulation from the works.

DIMENSIONS OF EXISTING BUILDINGS

The Contractor is advised to take all dimensions affecting the existing buildings on the site as he shall be held solely responsible for all new work being of the correct sizes.

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Bill No. 1
Alterations (Provisional)
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OLD MATERIALS

Old material from alterations and demolitions, except where described to be re-used or handed over, as well as all rubbish, etc., must be regularly carted from site and not be allowed to accumulate on or around site.

None of the old material is to be used for new work except where specifically described as being set aside for re-use.

Where certain materials or articles from demolitions or articles are described as to be handed over by the contractor to the regional representative or representative/agent, such materials or articles shall be properly stored by the contractor, until handing over thereof. The contractor must obtain an official receipt listing the materials or articles and the date of handing over. If the contractor fails to submit the receipt when requested, It shall be deemed that the materials or articles are still in his possession and he will be held liable to the department for the full replacement value thereof, which amount will be deducted from any monies due to the contractor.

SHORING, NEEDLING OR STRUTTING

All shoring, needling or strutting required to ensure the stability of the premises, shall be supplied, erected and maintained during the progress of the works and removed on completion, or when directed.

The shores, needles or struts shall be constructed from suitable and substantial timber and any other suitable materials necessary and shall be to the satisfaction of the Representative/ agent.

WATERING THE WORKS

Wherever and whenever necessary, or when directed by the Representative/ Agent the works shall be well watered with a jet or spray from a hose sufficient to prevent any nuisance from dust.

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ADDITIONAL CONDITIONS

1	Before commencing the alterations, the Contractor shall remove all furniture and other movable belongings from the building and leave the building empty and clean to ensure easy working environment.		Item	
2	Inspect existing roof for leakages and repair all leakages to watertight condition including supplying labour, material, equipment and tools that may be required.		Item	

TEMPORARY BARRIERS, SCREENS, ETC

Temporary barriers, screens, etc including removal

3	Shutter board barrier 3,0m high formed of 75 x 50mm studs at 600mm centres covered on one side with 19mm shutter board panels including corners, ends, etc	m		140
---	--	---	--	-----

Breaking up and removing mass concrete

4	Concrete slabs	m3		2
---	----------------	----	--	---

Taking out and removing doors, windows, etc from brickwork to be demolished

5	Timber single door and steel frame not exceeding 2,5m2	No		32
---	--	----	--	----

6	Glazed steel window not exceeding 2,5m2	No		32
---	---	----	--	----

Taking out and removing doors, windows, etc from brickwork to be demolished

7	Timber single door and lock not exceeding 2,5m2	No		152
---	---	----	--	-----

8	Steel single door not exceeding 2,5m2	No		4
---	---------------------------------------	----	--	---

Take out and remove timber doors, roller shutter doors, etc

9	Steel TV cage bolted to brick wall size 600mm x 500mm x 500mm deep	No		8
---	--	----	--	---

Taking off and removal of skirting

10	Timber skirting	m		1 800
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<u>Taking out and removing ironmongery</u>				
11	Chromium plated toilet paper holder	No	16	
12	Ceramic soap dispensers	No	16	
13	Chrome shower grab rails fixed to brick wall	No	16	
14	Shower Curtain including chrome curtain track 1m long	No	16	
15	Timber curtain rail 800mm long fixed to brick wall	No	128	
16	Timber curtain rail 1 200mm long fixed to brick wall	No	16	
<u>Hacking up/off and removing ceramic tiles from concrete or brickwork and preparing surfaces for new tile finish, etc</u>				
17	Tiles to floors	m2	8	
18	Tiles to walls	m2	6	
<u>Take out and removing glass, etc.</u>				
19	Glass from steel windows including cleaning out rebates and preparing for new glass	m2	4	
20	Mirror size 800 x 400mm high	No	120	
21	Mirror size 800 x 1200mm high	No	16	
<u>Taking up and removing vinyl floor covering, carpet, etc.</u>				
22	Vinyl tiles on floors	m2	1 319	
<u>Taking out and removing piping, sanitary fittings etc, including disconnecting, stoping fitting and making good floor and wall.</u>				
23	Vanity hand wash basin on concrete top	No	16	
24	Bath Tub 1700mm x 600mm x 500mm build into brick plinths	No	8	
25	9 Litre Low level cistern	No	16	
Carried to Collection				R
Bill No. 1 Alterations (Provisional) Prepared by Takgalang Consulting				

26	Vitreous china wc pan	No	16
27	Steel shower head and arm	No	16
<u>MAKING GOOD OF FINISHES ETC</u>			
28	Making good brickwork at top of Window 230mm brick wall including, lintels, brick reinforcement and plaster	m	4
<u>CLEANING EXISTING SURFACES, ETC</u>			
<u>Face brick surfaces and treat with brick dressing (Else where measured)</u>			
<u>High Pressure Cleaning to brickwork thoroughly with cleaning solutions of a moderately alkali (Cleaning solution to be approved by the Architect)</u>			
29	On External wall	m2	1 969
<u>SERVICING EXISTING</u>			
<u>Service existing steel door frame to a perfect complete state including restoring hinges, strike plates, etc. to match existing</u>			
30	Steel door frame not exceeding 2,5m2	No	304
<u>Service existing steel window stays, handles, etc. to match existing</u>			
31	Steel window not exceeding 2,5m2	No	160
<u>REPAIR EXISTING</u>			
<u>Repair existing steel window, door frames, gates etc.</u>			
32	Steel loose windows to be welded back into position and restore to functional working condition including replacing missing hinges, welding and straightening were required	No	6

OPENINGS THROUGH EXISTING WALLS ETC

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Bill No. 1
Alterations (Provisional)
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Breaking out for and forming openings through brick walls for new doors and frames including necessary precast concrete lintels and making good plaster on one side and into reveals and face brickwork on other side and into reveals and with ? concretethresholds with steel trowelled finish (new doors and frames and making good paintwork elsewhere)

33 Opening for door with steel frame 813 x 2032mm high overall through 230mm brick wall

No

4

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Bill No. 1
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**KAYALETHU STUDENT RESIDENCE
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Bill No. 1

Alterations (Provisional)

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 2</u>			
	<u>EARTHWORK (PROVISIONAL)</u>			
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 104 for CPAP formula purposes			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Nature of ground</u>			
	The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "hard rock" or "soft rock"			
	<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>EARTHWORKS</u>			
	<u>SITE CLEARANCE ETC</u>			
	<u>Site clearance</u>			
1	Stripping average 150mm thick layer of top soil and stockpiling on site	m2	13	
	<u>EXCAVATION, FILLING, ETC</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
2	Holes	m3	12	
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	Bill No. 2 Earthworks Prepared by Takgalang Consulting			

<u>Extra over trench and hole excavations in earth for excavation in</u>				
3	Soft rock	m3	1	
4	Hard rock	m3	1	
<u>Extra over all excavations for carting away</u>				
5	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	5	
<u>Risk of collapse of excavations</u>				
6	Sides of trench and hole excavations not exceeding 1,5m deep	m2	24	
<u>Keeping excavations free of water</u>				
7	Keeping excavations free of all water other than subterranean water		Item	
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density</u>				
8	Backfilling to trenches, holes, etc	m3	7	
<u>Earth filling (G5) supplied by the contractor compacted to 95% Mod AASHTO density</u>				
9	Under floors, steps, pavings, etc	m3	4	
<u>SOIL POISONING</u>				
<u>Soil insecticide</u>				
10	To bottoms and sides of trenches	m2	16	
Carried to Collection				R
Bill No. 2 Earthworks Prepared by Takgalang Consulting				

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Bill No. 2

Earthworks

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Bill No. 2
Earthworks
Prepared by
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Quantity Rate Amount

SECTION NO. 2

BILL NO. 2

**CONCRETE, FORMWORK AND
REINFORCEMENT**

NOTE :
Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 110 for CPAP formula purposes

SUPPLEMENTARY PREAMBLES

Cost of tests

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)

Formwork

Description 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

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.

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Bill No. 3
Concrete, Formwork and Reinforcement
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Formworks to soffits of solid slabs, etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described

Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Foundations"

CONCRETE

REINFORCED CONCRETE

25MPa/19mm concrete

1	Bases	m3	5
2	Concrete slabs	m3	11
3	Column	m3	2
4	Stairs	m3	10

CONCRETE SUNDRIES

Finishing top of surfaces of concrete smooth with wood float

5	Surface beds, slabs, etc	m2	87
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FORMWORK

SMOOTH FORMWORK (DEGREE OF ACCURACY I)

Smooth formwork to sides

6	Columns not exceeding 3.5m high	m2	8
7	Columns exceeding 3.5m high not exceeding 5m high	m2	4
8	Columns exceeding 5m high not exceeding 6.5m high	m2	4

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**KAYALETHU STUDENT RESIDENCE
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9	Columns exceeding 6.5m high not exceeding 8m high	m2	4
10	Columns exceeding 8m high not exceeding 9.5m high	m2	4
11	Columns exceeding 9.5m high not exceeding 11m high	m2	3
<u>Smooth formwork to soffits</u>			
12	Slabs propped up not exceeding 1.5m high	m2	7
13	Slabs propped up exceeding 1.5m high not exceeding 3.5m	m2	7
14	Slabs propped up exceeding 3.5m high not exceeding 5m	m2	7
15	Slabs propped up exceeding 5m high not exceeding 6.5m	m2	7
16	Slabs propped up exceeding 6.5m high not exceeding 8m	m2	7
17	Slabs propped up exceeding 8m high not exceeding 9.5m	m2	7
<u>Smooth formwork to sloping soffits</u>			
18	Stairs propped up not exceeding 1.5m high	m2	4
19	Stairs propped up exceeding 1.5m high not exceeding 3.5m	m2	4
20	Stairs propped up exceeding 3.5m high not exceeding 5m	m2	4
21	Stairs propped up exceeding 5m high not exceeding 6.5m	m2	4
22	Stairs propped up exceeding 6.5m high not exceeding 8m	m2	4
23	Stairs propped up exceeding 8m high not exceeding 9.5m	m2	4

ROUGH FORMWORK (DEGREE OF ACCURACY II)

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<u>Rough formwork to soffits</u>					
24	Slabs propped up not exceeding 1.5m high	m2	67		
<u>Rough formwork to sides</u>					
25	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	111		
<u>REINFORCEMENT (PROVISIONAL)</u>					
<u>High tensile steel reinforcement to structural concrete work</u>					
26	Various Diameter bars	t	5,54		
<u>Fabric reinforcement</u>					
27	Type 193 fabric reinforcement in concrete slabs, etc	m2	67		
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Bill No. 3 Concrete, Formwork and Reinforcement Prepared by Takgalang Consulting					

**KAYALETHU STUDENT RESIDENCE
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Concrete, Formwork and Reinforcement

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 3</u></p> <p><u>MASONRY</u></p> <p><u>(CPAP FORMULA WORK GROUP NO. 118)</u></p> <p>NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 118 for CPAP formula purposes</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>BRICKWORK</u></p> <p><u>Sizes in descriptions</u></p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p><u>Face bricks</u></p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.</p> <p><u>SUPERSTRUCTURE</u></p> <p><u>Brickwork of NFP bricks in class II mortar</u></p>			
1	Half brick walls	m2	161	
	<p><u>BRICKWORK SUNDRIES</u></p>			
	Carried to Collection			R
	<p>Bill No. 4 Masonry Prepared by Takgalang Consulting</p>			

<u>Brickwork reinforcement</u>					
2	75mm Wide reinforcement built in horizontally	m	387		
<u>Prestressed fabricated lintels</u>					
3	110 x 75mm Lintels in lengths not exceeding 3m	m	8		
4	Pair of 110 x 75mm Lintels in lengths not exceeding 3m	m	71		
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Bill No. 4
Masonry
Prepared by
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Bill No. 4

Masonry

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Masonry
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Item No	Quantity	Rate	Amount
<p><u>SECTION NO. 2</u></p> <p><u>BILL NO.4</u></p> <p><u>CARPENTRY AND JOINERY</u></p> <p><u>PREAMBLES</u></p> <p>The contractor is reverred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Treatment against insect pests</u></p> <p>Rates for all timber shall be deemed to include for treatment against insect pests</p> <p>All softwood for this job shall be treated to combat and prevent the spread of certain insect pests in accordance with Government Gazette Notice No R451 of 28 March 1969 and any amendments thereto. Proof of treatment shall be lodged with the Employer prior to the use of any timber in the works.</p> <p><u>Mitres, intersections, etc</u></p> <p>Descriptions of timber which is given linear, angles, rebates, grooves, chamfers, moulded edges, etc . are to be deemed to include for mitres, intersections, splay cut ends, stops, etc</p> <p>Descriptions of timber, etc shall be deemed to include for straight cutting and notching</p> <p><u>Fixing</u></p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete</p> <p style="text-align: right;">Carried to Collection</p> <p>Bill No. 5 Carpentry & Joinery Prepared by Takgalang Consulting</p>			R

Items described as "plugged" shall be deemed to include for screwing to fibre, plastic or metal plugs at not exceeding 600mm centres or shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete.

Descriptions are to be deemed to include for nails, screws, plugs, adhesives, holes, sin- kings, pelleting, etc

Structural timber

Descriptions of structural timber are to be deemed to include for joints in the length, holes, splay cut ends and mitres

All softwood structural timber shall be of stress grade V5 or M5 in accordance with SWABS specification 563 unless otherwise stated

Fascias, etc.

Descriptions of fibre cement fascias and barge boards shall be deemed to include for mitres, end junctions, screws, bolts, wall anchors, holes, etc.

Door frames

Rates for timber door frames shall be deemed to include for approved mild steel stay pegs in floors and hoop-iron clamps to walls, including holes, building in, etc

Particle board:

Particle board shall comply with the following specifications:

- a) SABS 1300 Particle board: exterior and flooring type
- b) SABS 1301 Particle board: interior type

Joinery:

Descriptions of frames shall be deemed to include frames, transomes, mullions, rails, etc

Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes

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Carpentry & Joinery
Prepared by
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Fixing

Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete

Decorative laminate finish:

Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish

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Bill No. 5
Carpentry & Joinery
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DOORS ETC

**Solid meranti doors with meranti concealed edges
hung to steel frames**

1	40mm Door size 813 x 2032mm high	No	152
2	40mm Door size 900 x 2 100mm high	No	4

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Bill No. 5
Carpentry & Joinery
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THE FOLLOWING IN SHELVING

Granite tops with polished finish

32mm Black granite top in bathrooms with bullnose finish

3	2500mm x 1000mm Wide granite table top seating area	No	8
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JOINERY FITTINGS

User note:

When using the following system of measuring cupboard fittings a detailed specification must either be incorporated on the detail drawings of the cupboards or included here

General

The following cupboard fittings have been measured as complete units i.e. the components of the units have not been separately measured. The descriptions, therefore, of such units shall be deemed to include all components, assembling, housing, notching, glueing, blocking, planting on and screwing with countersunk screws, edge strips, decorative plastic finish, glass, ironmongery, metalwork, paint or varnish finishes, etc

User note:

The above clause is to be amended if any or all the items of other trades i.e. glass, ironmongery, metalwork, paint or varnish finishes are measured separately and a statement to this effect shall be included

The references given in the descriptions are to the respective types of fittings detailed on the architect's drawings numbered annexed to these bills of quantities/accompanying these bills of quantities for tender purposes

JOINERY SUNDRIES

4	Chrome oval hanging rail 600mm long	No	120
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Carpentry & Joinery
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5	40 x 40mm mild steel hollow square section as vertical support 900mm long to reading table bolted to floor	No	240	
<u>DUCT COVERS</u>				
<u>Wrought meranti duct covers</u>				
6	Wooden duck covers with opening panels	m2	39	
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**KAYALETHU STUDENT RESIDENCE
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Carpentry & Joinery

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	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO.5</u></p> <p><u>IRONMONGERY</u></p> <p><u>PREAMBLES</u></p> <p>The contractor is reverred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill</p> <p><u>NOTE:</u>The following locks are to be suitable for master and grand master key operation</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>TRADE NAMES</u></p> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior written approval from the Representative / Agent</p> <p><u>FINISHES TO IRONMONGERY</u></p> <p>Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list :</p> <p>CH Chromium plated SC Satin chromium plated PT Epoxy coated PB Polished brass PL Polished and lacquered BS Satin bronze and lacquered AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black GE Grey enamelled SE Silver enamelled SD Sanded</p>			
	Carried to Collection			R
	<p>Bill No. 6 Ironmongery Prepared by Takgalang Consulting</p>			

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HINGES, BOLTS, ETC.

"QS Products" or similar approved

1	QS4417 Door hinge - stainless steel hinge pair of 100 x 76 x 2mm	No	269
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LOCKS

"QS Products" or similar approved

2	QS6055/1 Stainless steel cylinder latch lock 55mm backset including 66mm elemental cylinder, satin finish QS1104A and escutcheons QS 4403	No	237
3	QS1104 66mm elemental cylinder, satin finish	No	31
4	Brush Stainless Steel Hostel Lock. 150 x 150mm with sliding aluminium handle with hole for padlock indicator bolt and pull (Code: QS4445)	No	120

"CISA Products" or similar approved

5	"QS4445" 150 x 150mm Brush Stainless Steel Hostel Lock with sliding aluminium handle with hole for padlock indicator bolt and pull	No	104
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HANDLES, LETTERS, NAMEPLATES, ETC

"QS Products" or similar approved

6	Coupe Umea - 16mm diameter stainless steel lever handle on plate	No	16
7	QS2203BTB D Handle stainless steel 19 x 130mm Centers: 130mm	No	111
8	QS0055/5 Stainless steel bathroom deadbolt lock square forend	No	16
9	QS300 Panic push bar, single point locking	No	16

DOOR CLOSERS

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	<u>"QS Products" or similar approved</u>				
10	"QS680" Door closer, EN1154 fire-rated, size 2-3 silver	No	8		
	<u>LETTERS, NAMEPLATES, ETC</u>				
	<u>"Sign Force" or similar approved</u>				
11	Engraved Aluminium Room Number Door Sign with black infill as supplied by "Sign Force" and assembeled and mounted to manufacturer's specification. 60mm wide and length to be determined by wording	No	120		
12	150 x 150mm Reverse cut aluminium sign imagery inserted and mounted according to manufacturers detail. Imagery to co-ordinate with room use.	No	136		
	<u>PELMETS AND CURTAIN TRACKS</u>				
	<u>"Yokoto SA" or similar approved</u>				
13	Single Curtain Track with 44mm projection including 14 rollers per meter, brackets and stopped ends	m	122		
	<u>BATHROOM FITTINGS</u>				
	<u>"CTM" or similar approved</u>				
14	Gv Di Bella 3169 Nova Shower Soap Dish Chrome finish	No	32		
	<u>"TCS Hygiene" or similar approved</u>				
15	3 Roll Lockable Toilet Roll Holder 1mm Brushed Stainless Steel	No	32		
	<u>SUNDRIES</u>				
	<u>"QS Products" or similar approved</u>				
16	"Code:QS4422" stainless steel hooded door stop plugged to wall or floor.	No	239		
	<u>"Union"</u>				
17	"AL8722AS" rubber tipped hat and coat hook	No	32		
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Item No		Quantity	Rate	Amount
	<u>BILL NO ?</u>			
	<u>STRUCTURAL STEELWORK</u>			
	<u>User note</u>			
	<i>Consideration is to be given in specific applications (eg where "heavy" steel structures such as in industrial plants, towers for mine shafts, etc are dominant) to implement the principles laid down by the "Measurement for Structural Steelwork" as prepared and recommended by the South African Institute of Steel Construction</i>			
	<i>This bill however is based on the Standard System of Measuring Building Work Sixth Edition (Revised)</i>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<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>STEEL COLUMNS AND BEAMS</u>			
	<u>Welded columns in single lengths with flat base, cap, bearer and connection plates, bolted to concrete</u>			
1	120 x 120mm x 3kg/m H-section columns	t	0,13	
	<u>Welded beams in single lengths with flat bearer and connection plates, bolted to steel</u>			
2	254 x 146mm x 31kg/m I-section beams	t	0,63	
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	<u>SECTION NO. 2</u>			
	<u>BILL NO. 6</u>			
	<u>METALWORK</u>			
	<u>(CPAP FORMULA WORK GROUP NO. 136)</u>			
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 136 for CPAP formula purposes			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Descriptions</u>			
	Descriptions of bolts shall be deemed to include nuts and washers			
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete			
	Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described			
	<u>WELDED SCREENS, GATES, ETC</u>			
	<u>Screens and gates</u>			
1	Burglar bar screen and frame 813 X 500mm high overall	No	120	
	<u>PRESSED STEEL DOOR FRAMES</u>			
	<u>1,2mm Double rebated frames suitable for half brick walls</u>			
2	Frame for door 813 x 2 032mm high	No	8	
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	Bill No. 8 Metalwork Prepared by Takgalang Consulting			

1,2mm Double rebated frames suitable for one brick walls

3	Frame for door 900 x 2 100mm high	No	4
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STEEL WINDOWS, DOORS, ETC

Standard residential windows with side hung opening out

4	Window 500 x 1 160mm high	No	42
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5	Window 585x 1 540mm high	No	1
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6	Window 1 200 x 1 250mm high	No	4
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7	Window 2000 x 2700mm high	No	24
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ALUMINIUM WINDOWS, DOORS, ETC

User Note:

A detail specification is to be inserted as necessary

Note: Tenderers are referred to architect's drawings numbered annexed to these bills of quantities/accompanying these bills of quantities for tender purposes

Natural anodised aluminium doors glazed with 6,38mm clear float glass and plugged to brickwork or concrete

8	Door 1 800 x 2 555mm high	No	1
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9	Door 3 000 x 2 555mm high	No	1
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Turnstile

10	Titan single full height tenstile	No	1
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Metalwork
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Metalwork

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO. 7</u></p> <p><u>PLASTERING</u></p> <p><u>(CPAP FORMULA WORK GROUP NO. 142)</u></p> <p>NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 142 for CPAP formula purposes.</p> <p><u>INTERNAL PLASTER</u></p> <p><u>Cement plaster on brickwork</u></p>			
1	On walls	m2	295	
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	<p>Bill No. 9 Plastering Prepared by Takgalang Consulting</p>			

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 2</u></p> <p><u>BILL NO.8</u></p> <p><u>TILING</u></p> <p><u>PREAMBLES</u></p> <p>The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>TRADE NAMES</u></p> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior written approval from the Representative / Agent</p> <p><u>DESCRIPTIONS</u></p> <p>Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 4:1 cement plaster backing and descriptions of tiling on concrete floors, etc shall be deemed to include 3:1 cement mortar bedding</p> <p style="text-align: center;">-----</p> <p><u>WALL TILING</u></p> <p><u>"Union" or other equal and approved</u></p> <p><u>400mm x 400mm Porcelain tiles, mineralised with 3mmgrouting lines from Union Tiles or similarapproved. Natural finish. Grout: light grey or similar approved</u></p>			
1	On walls	m2	6	
	Carried to Collection			R
	Bill No. 10 Tiling Prepared by Takgalang Consulting			

FLOOR TILING

**400mm x 400mm Porcelain tiles, mineralised with
3mmgrouting lines from Union Tiles or
similarapproved. Natural finish. Grout: light grey or
similar approved**

2	On floors	m2	1 327
3	100mm tile skirting	m	1 800

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Tiling
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SECTION NO. 2

BILL NO.9

**PLUMBING AND DRAINAGE
(PROVISIONAL)**

PREAMBLES

The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill

SUPPLEMENTARY PREAMBLES

Erection and workmen

The erection and completion of this installation is to be carried out to the complete satisfaction of the Chief Director or his Representative/ Agent by a firm specialising in this type of work. The Chief Director reserves the right to reject such firm of specialists and their specification at any stage before signing of the contract

Pricing

The Tenderer must price each item in this section individually and no changes made by the tenderer shall be recognised

Where inclusive items are measured and priced, the contractor must on request, supply full details of the components and prices making up the inclusive items. If the contractor does not supply such details and prices within fourteen days after having been requested to do so, the Quantity Surveyor will determine such at his own discretion

Flush pans, etc.

Flush pans shall have straight or side outlets and "P" or "S" traps as necessary

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Plumbing and Drainage (Provisional)
Prepared by
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**Stainless steelbasins, sinks, wash troughs, urinals,
etc.**

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable

Waste unions

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings

TRADE NAMES

Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior written approval from the Representative / Agent

DESCRIPTIONS AND PREAMBLES

Reference shall be made to other trades for preambles and full descriptions of items not fully described in this trade which shall apply equally to work in this trade, unless otherwise described

RATES

Rates for all piping, fittings, etc shall include for all fixing in position of fittings, cutting of chases in brickwork or concrete, excavation of trenches, backfilling, etc unless otherwise described

DIAMETER OF PIPES

Diameters stated for pipes, traps, valves, etc are internal diameters, except uPVC, polyethylene, stainless steel and copper pipes for which external diameters are stated

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Plumbing and Drainage (Provisional)
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REDUCING FITTINGS

Where fittings have reducing ends or branches they are described as "reducing"

In the case of pipes with diameters not exceeding 60mm, only the largest end or branch 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

In the case of pipes with diameters exceeding 60mm, all sizes are given and no claim for extra bushes, reducers, etc will be entertained

uPVC PIPES AND FITTINGS

Sewer and drainage pipes and fittings shall be according to SABS 791, jointed and sealed with butyl rubber rings

Soil, waste and vent pipes and fittings shall be according to SABS 967 and solvent jointed

Cold water supply pressure pipes and fittings shall be according to SABS 966 and jointed by means of the "Lyng" type jointing system

Pipes shall be fixed and jointed according to SABS 0112

COPPER PIPES

Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin wall 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 pipes, capillary soldier fittings and compression fittings shall be Cobra Watertech or other equal approved type. Capillary soldier fittings shall comply with ISO 2016

HEAVY DUTY POLYETHYLENE PIPING (HDPE)

HDPE pipes shall be according to SABS 533 and fittings shall be of plastic compression type jointing. Jointing and laying shall be in accordance with the manufacturer's instructions

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WIRE GRATINGS

Descriptions of gutter outlets, etc shall be deemed to include wire balloon gratings

SANITARY FITTINGS

"Vaal" or Similar approved

1	431500 Sanitaryware vitreous china "Parktown" 90 degree outlet top inlet 431500 or back inlet 431600 closed rim back-to-wall pan. Top inlet can be used with an exposed flushvalve. Back inlet can be used with a concealed cistern, Vaal Sanitaryware duct cistern 7109DP or concealed flushvalve. Flush volume 6/3 litres, subject to the pan being installed with a cistern providing an effective 6/3 litre flush volume.	No	16	
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'Imola"or similar approved

2	Perspex pivot shower door screens 818 x 1 800mm high with frosted glass and accessories	No	16	
3	Perspex pivot shower door screens 900 x 1 800mm high with frosted glass and accessories	No	8	
4	Perspex pivot shower door screens 1 275 x 1 800mm high with frosted glass and accessories	No	8	

WASTE UNIONS, ETC

"Cobra Watertech"

5	32mm "301CP" Basin waste union	No	32	
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TRAPS, ETC

Traps, etc. including joints to steel pipe and/ or fittings unless otherwise described

6	32-40mm "Flexitrap" or other approved butyl rubber deep seal P or S trap	No	8	
7	Grease trap	No	8	

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<u>"Cobra Watertech"</u>				
8	32-40mm Chromium plated bottle trap	No	32	
9	Spare Pvc Trap For A1015 Floor Drain	No	32	
10	Thermostatic Mixers - SA-862 Chrome finished	No	32	
<u>Valves, etc. including joints to steel pipe and/ or fittings unless otherwise described</u>				
<u>"Isca" or Similar approved</u>				
11	'431500/431600' Alpi Aal0012 Extended Bibtap 15Mm	No	16	
12	Roma Ex5003/Ch Basin Mixer	No	32	
<u>"Megro" or Similar approved</u>				
13	40 V/R Vandal proof Shower / Spout chrome finish	No	32	
<u>SANITARY PLUMBING</u>				
<u>uPVC pipes</u>				
14	50mm Pipes fixed in floor, walls, ceilings, roofs, etc.	m	40	
<u>Extra over uPVC pipes for fittings</u>				
15	50mm Bend	No	40	
16	100mm Pan connector	No	8	
<u>WATER SUPPLIES</u>				
<u>Class O thin wall hard drawn copper pipes and fittings with capillary soldered type connections</u>				
17	15mm Pipes fixed in walls, ceilings, roofs, floors, etc.	m	48	
18	22mm Pipes fixed in walls, ceilings, roofs, floors, etc.	m	48	
<u>Extra over class O copper pipes for soldered capillary fittings</u>				
19	15mm fittings	No	60	
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20	22mm fittings	No	240		
<u>SUNDRIES</u>					
21	Allow an amount of R10,000.00 for unblocking gulleys and fixing of all waste pipes		Item		10 000,00
22	Allow an amount of R 50,000.00 for testing pipes and repairs to water pipes		Item		50 000,00
<u>TESTING</u>					
23	Provide all necessary apparatus, water, etc. for and test the whole of the Sanitary Plumbing and Water Supply installation to the satisfaction of the Representative/ Agent and the Local Authority, rectify all defective work free of charge and leave in perfect order		Item		
<u>STORAGE WATER TANK</u>					
<u>Water Tank etc.</u>					
24	10000 Litre JOJO tank	No	2		
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1	Panes exceeding 0,5m2 and not exceeding 2m2	m2	176	
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	<p>Bill No. 12 Glazing Prepared by Takgalang Consulting</p>			

MIRRORS, ETC.

Note:

Mirrors shall be of 6mm thick silvered GG quality polished float glass with rounded and polished edges and splayed corners

Unless otherwise described, mirrors shall be with four holes for and screwed to and including approved patent plugs in plastered or tiled wall with countersunk steel screws tap-threaded for and including screw type chromium plated dome-headed caps and felt washers

6mm Silvered float glass copper mirror fixed to walls with screws

2	Mirror size 400 x 600mm high	No	120	
3	Mirror size 800 x 1 200mm high	No	16	

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Glazing
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Glazing

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PAINT SPECIFICATION

All materials for paintwork for which South African Bureau of Standards specifications have been published shall comply the requirements of such specifications and shall bear the standardisation mark of the South African Bureau of Standards on the container or packing. Materials for paintwork for which no SABS specifications have been published shall be of a brand and manufacture approved by the Director-General prior to its use

DISTINCTION FOR COLOUR

Paintwork in different colours has not been measured separately, except for colours which have a value of 7 or less on the Munsell system as described above as well as for the following:

Paintwork on mouldings and bands picked out in colours differing from the surrounding paintwork of the same material

Paintwork on walls, ceilings, etc to patterns in more than one colour are described separately as "in patterned multi-colours"

Paint in dado's has not been measured separately, neither are cutting in of edges measured. Prices shall include for cutting in of contrasting colours or paints and masking as required.

PROFILED SURFACES

Painting of profiled surfaces are measured over the flat area, unless otherwise described

PROTECTION AGAINST CORROSION

Prices for painting structural steelwork are to include for corrosion protection as PW 371 clause 18.9.1 (c). See "Metalwork" for 18.9.1(a) (b) and (d)

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STRUCTURAL STEELWORK

All damaged paint areas are to be repaired in accordance with the original specification after completion of erection

All paint to structural steelwork is to be sourced from an approved paint manufacturer and to be applied in accordance with the manufacturers specifications

All bolts are to be degreased prior to erection and painted after erection

ON FAIR FACED BRICKWORK

Clean brickwork thoroughly and seal face brickwork with brick dressing

1	On external walls	m2	1 969	
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PAINT ON FLOATED PLASTER

Clean, prepare and apply one coat professional gypsum and plaster primer or similar approved and two coats Plascon low sheen pure acrylic paint. Colour: Prasa neutral. Plascon code: GR-Y03

2	On internal walls	m2	5 723	
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PAINT ON SMOOTH CONCRETE

Two coats interior quality PVA acrylic paint on work in bad condition

3	On slab ceiling	m2	1 764	
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PAINT ON METAL

Clean entire surface with Polycell Sugar Soap using bristle brooms or brushes or Scotch Brite pads to remove all surface contaminants, rinse with tap water and allow to dry. Remove loose and flaky paint and sand surface to a firm edge, feather edges and dust off. Emery paper any rust areas to bright metal and remove dust. Spot prime bare areas with Plascon Coastcote Primer Red Oxide (SNK 2) and allow 1 hour to dry. Finish with two coats of Nuroof Acrylic Roof Paint (TRP) or Dulux Roofguard (Code: D8) with an overcoating time of 4 hours.

Clean, prepare and seal roof covering, Spot prime bare areas with Plascon Coastcote Primer Red Oxide (SNK 2), Finish with two coats of Nuroof Acrylic Roof Paint (TRP) or Dulux Roofguard (Code: D8)

4	On corrugated roof sheeting.	m2	513
5	On windows with burglar bars	m2	249
6	On door frames	m2	199
7	On gutters, down pipes n.e. 300mm girth	m	340

Prepare, sand down and apply Plascon Rust Remover (PR1). Remove rust conerter with clean water and apply either Plascon Universal Unsercoat (UC1) or Professional Undercoat (PU800) to bare and repaired areas. Apply two coats Plascon Professional Gloss enamel (PSB 1000). Colour: White

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PAIN

ON WOOD

Prepare and apply one coat universal undercoat and two coats acrylic emulsion paint

8	On doors	m2	895
9	On shelves	m2	720

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SECTION SUMMARY - SECTION NO.2 - RENOVATIONS TO BUILDING

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SECTION NO. 3

BILL NO.1

ALTERATIONS, ETC

PREAMBLES

The contractor is referred to the Model Preambles for Trades (2008 edition) as issued by the Association of South African Quantity Surveyors before pricing this bill

Carried to Collection

R

Bill No. 1
Alterations (Provisional)
Prepared by
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SUPPLEMENTARY PREAMBLES

Abbreviated descriptions

Unless otherwise described any additional preambles and descriptions of items in the Bills following this Bill are to apply equally to this Bill in which abbreviated descriptions may be used

VISIT THE SITE

Tenderers are advised to visit the site and satisfy themselves as to the exact nature and extent of the work to be done. Claims due to the fact that the Tenderers have not visited the site shall not be entertained.

RATES FOR DEMOLITIONS

Rates for demolition work shall include for grubbing up concrete or stone foundations. Concrete surface beds and brick foundation walling and carting away. Material from the demolitions shall not be used as filling. Rates shall include for disconnecting and/ or sealing off electricity, water supply and sewerage. Allowance shall be made on demolitions of ceilings to clean ceiling voids of dust and including protection of adjacent properties from possible dust accumulation from the works.

DIMENSIONS OF EXISTING BUILDINGS

The Contractor is advised to take all dimensions affecting the existing buildings on the site as he shall be held solely responsible for all new work being of the correct sizes.

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Bill No. 1
Alterations (Provisional)
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OLD MATERIALS

Old material from alterations and demolitions, except where described to be re-used or handed over, as well as all rubbish, etc., must be regularly carted from site and not be allowed to accumulate on or around site.

None of the old material is to be used for new work except where specifically described as being set aside for re-use.

Where certain materials or articles from demolitions or articles are described as to be handed over by the contractor to the regional representative or representative/agent, such materials or articles shall be properly stored by the contractor, until handing over thereof. The contractor must obtain an official receipt listing the materials or articles and the date of handing over. If the contractor fails to submit the receipt when requested, It shall be deemed that the materials or articles are still in his possession and he will be held liable to the department for the full replacement value thereof, which amount will be deducted from any monies due to the contractor.

SHORING, NEEDLING OR STRUTTING

All shoring, needling or strutting required to ensure the stability of the premises, shall be supplied, erected and maintained during the progress of the works and removed on completion, or when directed.

The shores, needles or struts shall be constructed from suitable and substantial timber and any other suitable materials necessary and shall be to the satisfaction of the Representative/ agent.

WATERING THE WORKS

Wherever and whenever necessary, or when directed by the Representative/ Agent the works shall be well watered with a jet or spray from a hose sufficient to prevent any nuisance from dust.

Taking out and removing paving etc

1	Interlocking paving	m2	59	
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Bill No. 1
Alterations (Provisional)
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Bill No. 1

Alterations (Provisional)

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Bill No. 1
Alterations (Provisional)
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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 2</u>			
	<u>EARTHWORK (PROVISIONAL)</u>			
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 104 for CPAP formula purposes			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Nature of ground</u>			
	The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "hard rock" or "soft rock"			
	<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>EARTHWORKS</u>			
	<u>SITE CLEARANCE ETC</u>			
	<u>Site clearance</u>			
1	Stripping average 150mm thick layer of top soil and stockpiling on site	m2	59	
	<u>EXCAVATION, FILLING, ETC</u>			
	<u>Excavation in earth not exceeding 2m deep</u>			
2	Reduced levels under floors	m3	9	
3	Trenches	m3	17	
	Carried to Collection			R
	Bill No. 2 Earthworks (Provisional) Prepared by Takgalang Consulting			

4	Holes	m3	5	
	<u>Extra over trench and hole excavations in earth for excavation in</u>			
5	Soft rock	m3	2	
6	Hard rock	m3	1	
	<u>Extra over all excavations for carting away</u>			
7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	17	
	<u>Risk of collapse of excavations</u>			
8	Sides of trench and hole excavations not exceeding 1,5m deep	m2	64	
	<u>Keeping excavations free of water</u>			
9	Keeping excavations free of all water other than subterranean water		Item	
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density</u>			
10	Under floors, steps, pavings, etc	m3	15	
11	Backfilling to trenches, holes, etc	m3	12	
	<u>Earth filling supplied by the contractor compacted to 95% Mod AASHTO density</u>			
12	Under floors, steps, pavings, etc	m3	5	
	<u>Coarse river sand filling supplied by the contractor</u>			
13	Under floors etc	m3	2	
	<u>SOIL POISONING</u>			
	Carried to Collection			R
	Bill No. 2 Earthworks (Provisional) Prepared by Takgalang Consulting			

Soil insecticide

14	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	32
15	To bottoms and sides of trenches	m2	88

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Bill No. 2
Earthworks (Provisional)
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Section No. 4

Bill No. 2

Earthworks (Provisional)

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Bill No. 2
Earthworks (Provisional)
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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3</u></p> <p><u>BILL NO. 3</u></p> <p><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></p> <p>NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 110 for CPAP formula purposes</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>Description 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 style="text-align: right;">Carried to Collection</p> <p>Bill No. 3 Concrete, Formwork and Reinforcement Prepared by Takgalang Consulting</p>			R

Formworks to soffits of solid slabs, etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described

Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Foundations"

CONCRETE

REINFORCED CONCRETE

25MPa/19mm concrete

1	Strip footings	m3	5		
2	Bases	m3	2		

30MPa/19mm concrete

3	Surface beds	m3	2		
4	Isolated beams	m3	2		
5	Columns	m3	4		

CONCRETE SUNDRIES

Finishing top of surfaces of concrete smooth with wood float

6	Surface beds, slabs, etc	m2	32		
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FORMWORK

SMOOTH FORMWORK (DEGREE OF ACCURACY I)

Smooth formwork to sides

7	Isolated beams	m2	9		
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Bill No. 3
Concrete, Formwork and Reinforcement
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<u>Smooth formwork to soffits</u>					
8	Beams propped up exceeding 1,5m and not exceeding 3m high	m2	25		
<u>Smooth formwork to circular columns</u>					
9	220mm Diameter column 2,6m high	No	2		
<u>REINFORCEMENT (PROVISIONAL)</u>					
<u>High tensile steel reinforcement to structural concrete work</u>					
10	Various Diameter bars	t	3,14		
<u>Fabric reinforcement</u>					
11	Type 193 fabric reinforcement in concrete slabs, etc	m2	32		
Carried to Collection				R	
Bill No. 3 Concrete, Formwork and Reinforcement Prepared by Takgalang Consulting					

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Bill No. 3

Concrete, Formwork and Reinforcement

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3</u></p> <p><u>BILL NO. 4</u></p> <p><u>MASONRY</u></p> <p>NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 116 for CPAP formula purposes</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>BRICKWORK</u></p> <p><u>Sizes in descriptions</u></p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p><u>Face bricks</u></p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.</p> <p><u>BRICKWORK</u></p> <p><u>SUB-STRUCTURE</u></p> <p><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar</u></p>			
1	One brick walls	m2	14	
	Carried to Collection			R
	<p>Bill No. 4 Masonry Prepared by Takgalang Consulting</p>			

<u>Brickwork reinforcement</u>					
2	150mm Wide reinforcement built in horizontally	m	165		
<u>SUPERSTRUCTURE</u>					
<u>Brickwork of NFP bricks in class II mortar</u>					
3	One brick walls	m2	45		
<u>BRICKWORK SUNDRIES</u>					
<u>Brickwork reinforcement</u>					
4	150mm Wide reinforcement built in horizontally	m	176		
<u>Galvanised hoop iron cramps, ties, etc</u>					
5	30 x 1,6mm Roof tie 1,5m long with one end fixed to timber and other end built into brickwork	No	20		
<u>FACE BRICKWORK</u>					
<u>"Country Cottage Travetine FBS" Face brick pointed with flush horizontal and vertical joints</u>					
6	Extra over brickwork for face brickwork	m2	14		
<u>NUTEC-CEMENT WINDOW SILLS</u>					
<u>Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc</u>					
7	15 x 150mm Wide sills set flat and slightly projecting	m	5		
Carried to Collection				R	
Bill No. 4 Masonry Prepared by Takgalang Consulting					

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Bill No. 4

Masonry

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 5</u>			
	<u>WATERPROOFING</u>			
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 120 for CPAP formula purposes			
	<u>DAMP-PROOFING OF WALLS AND FLOORS</u>			
	<u>One layer of 375 micron "Consol Plastics Brikgrip DPC" embossed damp proof course</u>			
1	In walls	m2	6	
	<u>One layer of 250 micron "Consol Plastics Gunplas USB Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>			
2	Under surface beds	m2	32	
	<u>JOINT SEALANTS, ETC</u>			
	<u>"Denbraven LM15" polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>			
3	10 x 10mm In expansion joints in floors	m	19	
	Carried Forward to Summary of Section No. 4			R
	Bill No. 5 Waterproofing Prepared by Takgalang Consulting			

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 6</u>			
	<u>ROOF COVERINGS ETC</u>			
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 124 for CPAP formula purposes			
	<u>PROFILED METAL SHEETING AND ACCESSORIES</u>			
	<u>0,6mm "IBR" Z275 spelter galvanised troughed sheet steel with "globalcoat" finish on one side in single lengths fixed to timber purlins and 0,6mm galvanised sheet steel accessories with "globalcoat" finish on one side</u>			
1	Roof covering with pitch not exceeding 25 degrees	m2	59	
2	Head wall flashings 308mm girth	m	19	
	<u>ROOF AND WALL INSULATION</u>			
	<u>"Sisalation 410" housing grade glass fibre reinforced aluminium foil bonded insulation</u>			
3	Insulation laid taut over purlins (at approximately 1 000mm centres) and fixed concurrent with roof covering including galvanised steel straining wires	m2	59	
	Carried Forward to Summary of Section No. 4			R
	Bill No. 6 Roof Covering Prepared by Takgalang Consulting			

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 3</u></p> <p><u>BILL NO. 7</u></p> <p><u>CARPENTRY AND JOINERY</u></p> <p>NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.126 for CPAP formula purposes</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Particle board:</u></p> <p>Particle board shall comply with the following specifications:</p> <p>a) SABS 1300 Particle board: exterior and flooring type</p> <p>b) SABS 1301 Particle board: interior type</p> <p><u>Joinery:</u></p> <p>Descriptions of frames shall be deemed to include frames, transoms, mullions, rails, etc</p> <p>Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes</p> <p><u>Fixing</u></p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete</p> <p><u>Decorative laminate finish:</u></p> <p>Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish</p>			
	Carried to Collection		R	
	<p>Bill No. 7 Carpentry and Joinery Prepared by Takgalang Consulting</p>			

ROOFS, ETC

Plate nailed timber roof truss construction

The following is applicable in respect of roof trusses:

Trusses are at maximum 1,10m centres

Roof covering is galvanised IBR roof sheeting with "Globalcoat" finish on one side on 50 x 75mm purlins at 1,0m maximum centres.

Ceilings are generally 6,4mm gypsum plasterboard on 38 x 38mm brandering.

All timber to be sawn softwood in accordance with V4 or M4 as defined in SABS 563 or SABS 1245.

Metal connector plates shall have a minimum yield strength of 228 MPa and a minimum ultimate tensile strength of 330 Mpa with hot-dip galvanised finish.

All joints to be close fitted butt joints.

Trusses shall be designed by a registered supplier of prefabricated trusses who shall issue an Engineers Certificate upon completion of the installation.

The dimensions in the descriptions of the trusses are nominal and actual measurements are to be obtained on site before design or fabricaton commences.

The tenderers must study the roof plan and sections as attached to the back of these bills of quantities (refer drawing No.'s SCIE-LAB 001 & 002) and must obtain prices from a qualified and registered roof truss supplier as no claims in this regard will be entertained.

Sawn softwood

1	38 x 114mm Wall plates	m	29	
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R

Bill No. 7
Carpentry and Joinery
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2	Design, manufacture and deliver on site, plate nailed hip roof truss construction to Laundry, 47m ² overall on plan, each truss with 800mm eaves overhang projecting both sides, including all necessary purlins, runners, bracing and cross bracing (wall plates elsewhere)	No	1		
3	Take delivery, temporary store, hoist in position and erect plate nailed timber roof trusses, purlins, gangboarding, temporary and permanent bracing, etc (measured on slope of roof)	m ²	47		
	<u>Sundries</u>				
4	Two coats creosote on sawn timbers	m ²	5		
	<u>EAVES , VERGES , ETC</u>				
	<u>"Everite" pressed nutec-cement</u>				
5	12 x 225mm Fascias and barge boards including galvanised steel H-profile jointing strips	m	27		
	<u>DOORS ETC</u>				
	<u>Solid Core Meranti timber external door with min 1Hr Fire rating</u>				
6	44mm Door 813 x 2 032mm high	No	2		
	<u>THE FOLLOWING IN SHELVING</u>				
	<u>Shelving</u>				
	<u>16mm Laminated block board timber to cupboards</u>				
7	1 200mm long x 200mm high x 300mm Wide top shelving with 3 shelves at 350mm c/c vertically fixed to brick wall at 1300mm hieght back uprights, brackets, etc as Architectural detail PROPOSED NEW LAUNDRY	No	2		
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	Bill No. 7 Carpentry and Joinery Prepared by Takgalang Consulting				

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Section No. 4

Bill No. 7

Carpentry and Joinery

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Bill No. 7
Carpentry and Joinery
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Item No		Quantity	Rate	Amount
	<u>BILL NO. 3</u>			
	<u>BILL NO. 8</u>			
	<u>CEILING, PARTITIONS AND ACCESS FLOORING</u>			
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 129 for CPAP formula purposes			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Descriptions:</u>			
	Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete			
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted" the bolts have been given elsewhere			
	<u>CEILING ETC</u>			
	<u>"Aerolite" insulation</u>			
1	75mm Insulation closely fitted and laid on top of brandering between roof timbers etc	m2	32	
	<u>NAILED UP CEILING</u>			
	<u>6,4mm "Rhino" gypsum plasterboard with H-type pressed steel jointing strips</u>			
2	Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres	m2	32	
3	Extra over ceiling for 650 x 650mm trap door of 38 x 50mm wrought softwood rebated framing with one 38 x 50mm sawn softwood cross brander covered with ceiling board and fitted flush in opening	No	1	
	Carried to Collection			R
	Bill No. 8 Ceilings, Partitions and Access Flooring Prepared by Takgalang Consulting			

4	<u>"Rhino" gypsum plasterboard cornices</u> 75mm Coved cornices	m	29	
	Carried to Collection			R
	Bill No. 8 Ceilings, Partitions and Access Flooring Prepared by Takgalang Consulting			

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Section No. 4

Bill No. 8

Ceilings, Partitions and Access Flooring

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Bill No. 8
Ceilings, Partitions and Access Flooring
Prepared by
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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3</u></p> <p><u>BILL NO.9</u></p> <p><u>IRONMONGERY</u></p> <p><u>PREAMBLES</u></p> <p>The contractor is reverred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill</p> <p><u>NOTE:</u>The following locks are to be suitable for master and grand master key operation</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>TRADE NAMES</u></p> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior written approval from the Representative / Agent</p> <p><u>FINISHES TO IRONMONGERY</u></p> <p>Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list :</p> <p>CH Chromium plated SC Satin chromium plated PT Epoxy coated PB Polished brass PL Polished and lacquered BS Satin bronze and lacquered AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black GE Grey enamelled SE Silver enamelled SD Sanded</p> <p style="text-align: center;">Carried to Collection</p> <p>Bill No. 9 Ironmongery Prepared by Takgalang Consulting</p>			R

Carried to Collection

Bill No. 9
Ironmongery
Prepared by
Takgalang Consulting

R

HINGES, BOLTS, ETC.

"QS Products" or similar approved

1 QS4417 Door hinge - stainless steel hinge pair of 100 x 76 x 2mm

No

2

LOCKS

"QS Products" or similar approved

2 QS6055/1 Stainless steel cylinder latch lock 55mm backset including 66mm elemental cylinder, satin finish QS1104A and escutcheons QS 4403

No

2

Carried to Collection

R

Bill No. 9
Ironmongery
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Section No. 4

Bill No. 9

Ironmongery

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Bill No. 9
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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 10</u>			
	<u>METALWORK</u>			
	<u>(CPAP FORMULA WORK GROUP NO. 136)</u>			
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 136 for CPAP formula purposes			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Descriptions</u>			
	Descriptions of bolts shall be deemed to include nuts and washers			
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete			
	Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described			
	<u>1,2mm Double rebated frames suitable for one brick walls</u>			
1	Frame for door 900 x 2100mm high and fixed fanlight 300mm high	No	2	
	<u>STEEL WINDOWS, DOORS, ETC</u>			
	<u>Standard residential windows with side hung opening out</u>			
2	Window 1 200 x 1 250mm high	No	4	
	<u>Turnstile</u>			
3	Titan single full height tenstile	No	1	
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	Bill No. 10 Metalwork Prepared by Takgalang Consulting			

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 11</u>			
	<u>PLASTERING</u>			
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 142 for CPAP formula purposes.			
	<u>SCREEDS</u>			
	<u>Screeds on concrete</u>			
1	25mm Thick on floors and landings	m2	32	
	<u>INTERNAL PLASTER</u>			
	<u>Cement plaster on brickwork</u>			
2	On walls	m2	37	
3	On narrow widths	m2	1	
	<u>EXTERNAL PLASTER</u>			
	<u>Cement plaster on brickwork</u>			
4	On walls	m2	41	
5	On narrow widths	m2	1	
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	Bill No. 11 Plastering Prepared by Takgalang Consulting			

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3</u></p> <p><u>BILL NO.12</u></p> <p><u>TILING</u></p> <p><u>PREAMBLES</u></p> <p>The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>TRADE NAMES</u></p> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior written approval from the Representative / Agent</p> <p><u>DESCRIPTIONS</u></p> <p>Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 4:1 cement plaster backing and descriptions of tiling on concrete floors, etc shall be deemed to include 3:1 cement mortar bedding</p> <p style="text-align: center;">-----</p> <p><u>WALL TILING</u></p> <p><u>400mmx400mm Ceramic tiles fixed to internal walls fixed with adhesive to bedding and flush pointed with tinted waterproof jointing compound</u></p>			
1	On walls	m2	6	
	<p><u>FLOOR TILING</u></p>			
	Carried to Collection			R
	<p>Bill No. 12 Tiling Prepared by Takgalang Consulting</p>			

400mm x 400mm Porcelain tiles, mineralised with 3mmgrouting lines from Union Tiles or similarapproved. Natural finish. Grout: light grey or similar approved

2	On floors	m2	32		
3	100mm tile skirting	m	27		

Carried to Collection

R

Bill No. 12
Tiling
Prepared by
Takgalang Consulting

**KAYALETHU STUDENT RESIDENCE
FOR VAAL UNIVERSITY OF TECHNOLOGY**

Section No. 4

Bill No. 12

Tiling

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Bill No. 12
Tiling
Prepared by
Takgalang Consulting

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Item
No

Quantity

Rate

Amount

SECTION NO. 2

BILL NO.9

**PLUMBING AND DRAINAGE
(PROVISIONAL)**

PREAMBLES

The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill

SUPPLEMENTARY PREAMBLES

Erection and workmen

The erection and completion of this installation is to be carried out to the complete satisfaction of the Chief Director or his Representative/ Agent by a firm specialising in this type of work. The Chief Director reserves the right to reject such firm of specialists and their specification at any stage before signing of the contract

Pricing

The Tenderer must price each item in this section individually and no changes made by the tenderer shall be recognised

Where inclusive items are measured and priced, the contractor must on request, supply full details of the components and prices making up the inclusive items. If the contractor does not supply such details and prices within fourteen days after having been requested to do so, the Quantity Surveyor will determine such at his own discretion

Flush pans, etc.

Flush pans shall have straight or side outlets and "P" or "S" traps as necessary

Carried to Collection

R

Bill No. 13
Plumbing and Drainage (Provisional)
Prepared by
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**Stainless steelbasins, sinks, wash troughs, urinals,
etc.**

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable

Waste unions

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings

TRADE NAMES

Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior written approval from the Representative / Agent

DESCRIPTIONS AND PREAMBLES

Reference shall be made to other trades for preambles and full descriptions of items not fully described in this trade which shall apply equally to work in this trade, unless otherwise described

RATES

Rates for all piping, fittings, etc shall include for all fixing in position of fittings, cutting of chases in brickwork or concrete, excavation of trenches, backfilling, etc unless otherwise described

DIAMETER OF PIPES

Diameters stated for pipes, traps, valves, etc are internal diameters, except uPVC, polyethylene, stainless steel and copper pipes for which external diameters are stated

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Bill No. 13
Plumbing and Drainage (Provisional)
Prepared by
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REDUCING FITTINGS

Where fittings have reducing ends or branches they are described as "reducing"

In the case of pipes with diameters not exceeding 60mm, only the largest end or branch 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

In the case of pipes with diameters exceeding 60mm, all sizes are given and no claim for extra bushes, reducers, etc will be entertained

uPVC PIPES AND FITTINGS

Sewer and drainage pipes and fittings shall be according to SABS 791, jointed and sealed with butyl rubber rings

Soil, waste and vent pipes and fittings shall be according to SABS 967 and solvent jointed

Cold water supply pressure pipes and fittings shall be according to SABS 966 and jointed by means of the "Lyng" type jointing system

Pipes shall be fixed and jointed according to SABS 0112

COPPER PIPES

Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin wall 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 pipes, capillary soldier fittings and compression fittings shall be Cobra Watertech or other equal approved type. Capillary soldier fittings shall comply with ISO 2016

HEAVY DUTY POLYETHYLENE PIPING (HDPE)

HDPE pipes shall be according to SABS 533 and fittings shall be of plastic compression type jointing. Jointing and laying shall be in accordance with the manufacturer's instructions

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Bill No. 13
Plumbing and Drainage (Provisional)
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WIRE GRATINGS

Descriptions of gutter outlets, etc shall be deemed to include wire balloon gratings

RAINWATER DISPOSAL

0,6mm Galvinised steel gutters

1	150 x 100mm gutters	m	27
2	100mm Diameter rainwater pipes	No	4
3	Extra over gutter for outlet for 100mm pipe	No	4
4	Extra over 100mm eaves gutter for stopped end	No	4
5	Extra over 100mm eaves gutter for angle	No	4

SANITARY FITTINGS

"Franke" or similar approved

6	500 x 600mm stainless steel grade 304 18/10 drop on washtrough product model LDL	No	6
---	--	----	---

BUDGETARY ALLOWANCE

7	Allow a budgetary allowance of R 50 000.00 for drainage	Item	50 000,00
8	Allow a budgetary allowance of R 50 000.00 for water	Item	50 000,00

Carried to Collection

R

Bill No. 13
Plumbing and Drainage (Provisional)
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**KAYALETHU STUDENT RESIDENCE
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Section No. 4

Bill No. 13

Plumbing and Drainage (Provisional)

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Plumbing and Drainage (Provisional)
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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3</u></p> <p><u>BILL NO.14</u></p> <p><u>GLAZING</u></p> <p><u>PREAMBLES</u></p> <p>The contractor is reverred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>TRADE NAMES</u></p> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior written approval from the Representative / Agent</p> <p style="text-align: center;">-----</p> <p><u>GLAZING TO STEEL WITH PUTTY</u></p> <p><u>6mm Laminated Obscure safety glass</u></p>			
1	Panes exceeding 0,5m2 and not exceeding 2m2	m2	6	
	Carried Forward to Summary of Section No. 4			R
	<p>Bill No. 14 Glazing Prepared by Takgalang Consulting</p>			

Item No		Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 15</u>			
	<u>PAINTWORK</u>			
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 152 for CPAP formula purposes			
	<u>ON FLOATED PLASTER</u>			
	<u>One coat alkali resistant primer, one undercoat and two coats eggshell enamel paint</u>			
1	On internal walls	m2	37	
	<u>One coat alkali resistant primer, one undercoat and two coats eggshell enamel paint</u>			
2	On external walls	m2	41	
	<u>ON PLASTERBOARD</u>			
	<u>One coat primer and two coats interior quality PVA emulsion paint</u>			
3	On ceilings and cornices	m2	32	
	<u>ON FIBRE-CEMENT</u>			
	<u>One coat primer and two coats interior quality acrylic PVA paint</u>			
4	On internal window sills not exceeding 300mm wide or girth	m	5	
	<u>One coat primer and two coats exterior quality PVA emulsion paint</u>			
5	On fascias and bargeboards	m2	8	
	<u>ON METAL</u>			
	Carried to Collection			R
	Bill No. 15 Paintwork Prepared by Takgalang Consulting			

Spot priming defects in pre primed surfaces with zinc chromate primer and applying one undercoat and two coat high gloss enamel paint on steel

6	On door frames	m2	3
7	On windows with burglar bars	m2	6

ON WOOD

Three coats polyurethane semi-gloss varnish

8	On doors	m2	7
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Carried to Collection

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Bill No. 15
Paintwork
Prepared by
Takgalang Consulting

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Section No. 4

Bill No. 15

Paintwork

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3	Concrete, Formwork and Reinforcement	99	
4	Masonry	102	
5	Waterproofing	103	
6	Roof Covering	104	
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8	Ceilings, Partitions and Access Flooring	111	
9	Ironmongery	115	
10	Metalwork	116	
11	Plastering	117	
12	Tiling	120	
13	Plumbing and Drainage (Provisional)	125	
14	Glazing	126	
15	Paintwork	129	
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Item
No

Quantity Rate Amount

SECTION NO. 3

BILL NO. 1

**PROVISIONAL SUMS & BUDGETARY
ALLOWANCES**

NOMINATED SUB-CONTRACTS

The following Provisional Amounts are for work to be executed by the Representative/Agent under a Nominated Sub-Contract

CASH DISCOUNT

No cash discount. All provisional sums are "NET".

ATTENDANCE

Without in any way limiting the meaning and interpretation, "general attendance" on sub-contractors shall include free of charge to the sub-contractor the following services for the purpose of the relative sub-contract works:

- 1) access to the site and to the places where the work is to be carried out, including the use of any temporary personnel hoists erected by the Contractor for his own use;
- 2) the provision of water and lighting and single and/or three phase electric power to a position within 50mm metres of the place where work is to be carried out, but excluding water, fuel and power for commissioning of the installation for which the Contractor shall be responsible;
- 3) the provision of an area for office accommodation, tempory workshops and for the storage of plant and materials;
- 4) the use of erected scaffolding belonging to the Contractor, in common with others having the like right whilst it so remains erected upon the site;
- 5) the use of classrooms, latrine, health and welfare

Carried to Collection

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Bill No. 1
Provisional Sums
Prepared by
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- facilities, and the like, where provided;
- 6) the use of the site telephone (if provided) subject to the payment by the sub-contractor for all his outgoing calls;
- 7) tempory casing and/or other protection of the work;
- 8) site security measures;
- 9) hoisting of the sub-contractor's material in loads not exceeding 500 kg;
- 10) making good in all trades and final cleaning down on completion.

NOTES:

1. The Contractor's attention is drawn specifically to the Principal Building Agreement Clause 20.0 (Nominated Sub-Contractors), Clause 21.0 (Selected Sub-Contractors) and Clause 22 (Work by Others) and to the related Clauses in Section 1, Bill No. 1 - Preliminaries
2. The Contractor's attention is drawn also to the definition of attendance on Nominated or Selected Sub-Contractors and of fuel, power and water for commissioning of mechanical and other specialised installations given in the JBCC Preliminaries
3. Where special attendance includes the provision of hoisting facilities for a Sub-Contractor then the Contractor shall:-
 - * Ensure that the capacities of his hoisting equipment are sufficient to deal with the masses and the quantities of the items to be hoisted,
 - * Schedule the times of availability of the hoisting equipment for each Sub-Contractor,
 - * Provide all necessary personnel to operate the hoisting equipment,

all to enable the Sub-Contractor to execute the hoisting or lowering of his material, etc. using the facilities provided by the Contractor

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FOR VAAL UNIVERSITY OF TECHNOLOGY**

4. Under no circumstances may any Provisional Amount, etc. be extended at an amount lower than the amount given in this Bill

PROVISIONAL SUMS

Landscaping

1 Provide the sum of R 70 000 (Seventy Thousand Rands) for landscaping to be determined by the Architect on site

Item 70 000,00

2 Profit

Item

3 Attendance

Item

Balustrading

4 Provide the sum of R70 000.00 (Seventy Thousand Rands) for balustrading

Item 70 000,00

5 Profit

Item

6 Attendance

Item

Sun Shading

7 Provide a sum of R 100 000.00 (One Hundred Thousand Rands) for a sun shading system

Item 100 000,00

8 Profit

Item

9 Attendance

Item

Signage

10 Provide a sum of R 50 000.00 (Fifty Thousand Rands) for signage

Item 50 000,00

11 Profit

Item

12 Attendance

Item

BUDGETARY ALLOWANCES

Carried to Collection

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**KAYALETHU STUDENT RESIDENCE
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OHS Agent

13 Allow a budgetary allowance of R 350 000.00 (Three Hundred and Fifty Thousand Rands) for OHS Agent

Item	350 000,00
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Civil Engineer

14 Allow a budgetary allowance of R 100 000.00 for civil design and supervision

Item	100 000,00
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**KAYALETHU STUDENT RESIDENCE
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Section No. 5

Bill No. 1

Provisional Sums

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Bill No. 1
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**KAYALETHU STUDENT RESIDENCE
FOR VAAL UNIVERSITY OF TECHNOLOGY**

Section No	<u>FINAL SUMMARY</u>	Page No	Amount
2	SECTION NO.1 - PRELIMINARIES	31	
3	SECTION NO.2 - RENOVATIONS TO BUILDING	87	
4	SECTION NO.3 - NEW LAUNDRY	130	
5	SECTION NO.3 - PROVISIONAL SUMS	135	
	Sub-Total		R
	PART B:		
	ELECTRICAL INSTALLATION (See separate document - Part B) (Value-Added Tax excluded)	Item	
	Sub Total		R
	COMMUNITY LIAISON OFFICER		
	Make a provision for the sum of R 78 000.00 (Seventy Eight thousand Rands) for the Community Liaison Officer @ R 6 500.00 per month for 12 months	Item	78 000,00
	Sub-Total		R
	ADD: Value Added Tax @ 15%		R
	Carried to Form of Tender		R
	Prepared by Takgalang Consulting		

T22/2021

VAAL UNIVERSITY OF TECHNOLOGY

**REFURBISHMENT OF KHAYALETHU RESIDENCE -
BILL OF QUANTITIES (BOQ)
PART B: ELECTRICAL INSTALLATION**

Conditions

1. The tender will make provision for the following:
 - (i) All labour and supervision required.
 - (ii) All machinery and equipment required to perform the required services.
 - (iii) All materials, consumables, etc.
 - (iv) The tender amount will be a fixed fee and no rate of exchange or escalation is applicable.
 - (v) The appointed contractor should adhere to the stipulations and regulations of the OHS Act.

2. The tender price includes the following:
 - (i) All transport costs;
 - (ii) Installation cost;
 - (iii) Commissioning of equipment.
 - (iv) All material costs

3. As stipulated in (1) above, samples of all sockets, light fittings and light switches shall be submitted to the engineer, upon request, for approval. Only thereafter can the contractor order the rest of the material. VUT reserves the right to terminate the contract if the samples submitted are not acceptable and the Tenderer does not take the required action to submit samples that are acceptable. In the event that the tender is terminated by the Vaal University of Technology, VUT will not be liable for any payment to the contractor of whatever nature.

4. The entire Bill of Quantities is re-measurable and the contractor must re-measure all items before procurement. If any discrepancies are found the engineer should be notified immediately.

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETHU RESIDENCE
PART B: ELECTRICAL INSTALLATION: BUILDING WORK
LIST A: DISTRIBUTION BOARD

B1

Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
1	DISTRIBUTION BOARDS					
	Supply, installation and commissioning of complete distribution board with architrave and equipment in the positions as indicated on the drawings, including the connection of all conduiting and termination of all wiring to the necessary equipment.					
1.1	Refurbish VB-A, VB-B, VB-C, VB-D, replace all circuit breakers (6kA - equal or similar to CBI 13mm) and wiring as detailed below:					
1.1.1	Remove, powdercoat and reinstall existing DB Frame, Faceplate and Door	No	4			
1.1.2	Install Blank Plates in DB	No	100			
1.1.3	Manufacture Powdercoat and Install DB Cover plate for Breakers	No	4			
1.1.4	Manufacture Powdercoat and Install DB Frame and Door	No	4			
1.1.5	Remove, powdercoat and reinstall existing Electrical Drawboxes Frame and Door in Kitchens	No	12			
1.1.6	Three Pole 500A Isolator for Main Switch (20kA)	No	1			
1.1.7	Three Pole 150A Circuit breaker for feed to top DBs (15kA)	No	3			
1.1.8	Three Pole 250A Circuit breaker for feed to top DBs (15kA)	No	1			
1.1.9	Three Pole 125A Circuit breaker for VB-B, VB-C (15kA) with busbar connections on load side.	No	2			
	TOTAL CARRIED FORWARD					

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETHU RESIDENCE
PART B: ELECTRICAL INSTALLATION: BUILDING WORK
LIST A: DISTRIBUTION BOARD

Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
	AMOUNT BROUGHT FORWARD					
1.1.10	Three Pole 225A Circuit breaker for VB-D (15kA) with busbar connections on load side.	No	1			
	250A Copper Busbars for DBs VB-A (400mm length)	No	3			
	150A Copper Busbars for DBs VB-B, VB-C, VB-D (400mm length)	No	9			
1.1.11	Three Pole 35A Circuit breaker for Geyser (6kA)	No	16			
1.1.12	Double Pole 63A ELU (6kA) with Overload Protection	No	44			
1.1.13	Double Pole 10A Circuit breaker for Lights (6kA)	No	44			
1.1.14	Single Pole 20A Circuit breaker for Plugs (6kA)	No	84			
1.1.15	Single Pole 35A Circuit breaker for Stove (6kA)	No	16			
1.1.16	Single Pole 20A Circuit breaker for Heaters (6kA)	No	32			
1.1.17	Single Pole 20A Circuit breaker for Hydro Boilers (6kA)	No	8			
1.1.18	Single Pole 5A Circuit breaker for Photo Cell and Walkway lights (6kA)	No	9			
1.1.19	Four Pole 40A Contactor for Outside Lights and Walkway lights	No	5			
	TOTAL CARRIED FORWARD					

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETU RESIDENCE
PART B: ELECTRICAL INSTALLATION: BUILDING WORK
LISTA: DISTRIBUTION BOARD

Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
AMOUNT BROUGHT FORWARD						
1.1.20	Three Pole 80A Circuit breaker to VB-E (6kA)	No	1			
1.1.21	Surge Arrestor for DB VB-A (DEHN Ventil DV M TT 255)	No	1			
1.1.22	Electronic Time Switch, 24 Hour with battery backup	No	4			
1.2	New VB-E, Laundry - 66 Way added (6kA - equal or similar to CBI 13mm) as detailed below:					
1.2.1	Install Blank Plates in DB	No	30			
1.2.2	Three Pole 80A Circuit breaker (6kA)	No	1			
1.2.3	Double Pole 10A Circuit breaker for Lights (6kA)	No	1			
1.2.4	Double Pole 63A ELU (6kA) with Overload Protection	No	3			
1.2.5	Single Pole 20A Circuit breaker for Plugs (6kA)	No	9			
1.2.6	Single Pole 35A Circuit breaker for Geyser (6kA)	No	1			
1.2.7	66 Way (13mm) Surface Mount DB	No	1			
TOTAL CARRIED FORWARD TO SUMMARY OF BILL OF QUANTITIES PAGE B14						

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETHU RESIDENCE

PART B: ELECTRICAL INSTALLATION: BUILDING WORK

LIST B: ELECTRICAL INSTALLATION WORK

Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
1.	CONDUITING					
	The supply and installation of conduiting for lighting and power circuits, including ends, joints, ferrules, locknuts, cutting, threading reaming, bending and setting, where required:					
1.1	20 mm dia PVC for electrical service lights (installed in Ceiling - VB-E)	m	45			
1.2	20 mm dia PVC for electrical service lights (chased in wall - VB-E)	m	10			
1.3	20 mm dia PVC for electrical services Plugs (installed in ceiling - VB-E)	m	10			
1.4	20 mm dia PVC for electrical service plugs (chased in wall - VB-E)	m	10			
1.5	20 mm dia PVC for electrical service lights (installed in Ceiling)	m	100			
1.6	20 mm dia PVC for electrical service (Chasing and plastering of wall Included)	m	1200			
1.7	20 mm dia flexible PVC for stove service	m	32			
1.8	50mm dia Nextube	m	2			
2.	POWER SKIRTING AND ACCESSORIES					
	The supply, installation and connecting of grey pvc power skirting complete with all accessories, ends, bends, etc. Equal or similar to Décor Duct					
2.1	1 Tier PVC power skirting and power skirting risers with covers	m	16			
2.2	Power skirting end cap	No	4			
	TOTAL CARRIED FORWARD					

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETHU RESIDENCE

PART B: ELECTRICAL INSTALLATION: BUILDING WORK

LIST B: ELECTRICAL INSTALLATION WORK

Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
	AMOUNT BROUGHT FORWARD					
2.3	Power skirting internal elbow / standard tee	No	1			
2.4	16A single normal switch socket outlet with cover in power skirting	No	11			
3.	DRAW BOXES					
	The supply and installation of flush mounted, multi-way draw boxes, including the termination of conduits with ferrules and locknuts to same.					
3.1	60 mm dia galvanised steel, round, multi-way for electrical service (25mm)	No	16			
3.2	100 x 100 x 100 mm galvanised steel for electrical services (Plugs, stove, Geyser and TV point)	No	80			
3.3	100 x 100 x 50 mm galvanised steel for electrical services (Flush mounted)	No	110			
3.4	100 x 100 x 50 mm galvanised steel for electrical services (VB-E switches)	No	3			
4.	CONDUCTORS					
	The supply, installation in conduit and connecting up to equipment of stranded copper conductors.					
4.1	4 sq. mm PVC insulated (Stove and Geyser)	m	5760			
4.2	2,5 sq. mm PVC insulated (Plugs, Lights and Geysers)	m	23150			
	TOTAL CARRIED FORWARD					

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETHU RESIDENCE

PART B: ELECTRICAL INSTALLATION: BUILDING WORK

LIST B: ELECTRICAL INSTALLATION WORK

Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
	AMOUNT BROUGHT FORWARD					
4.3	2,5 sq. mm bare (Stove and Geyser)	m	1820			
4.4	1,5 sq. mm bare (Plugs, Lights and Heaters)	m	10385			
4.5	2,5 sq. mm, 2 Core incl. bare earth, Surfex (round) Cable - longitudinal aluminium/polyethylene laminate	m	100			
5.	SWITCHES					
	Supply, installation and connecting up of light-switches with white cover plates equal or similar to CBI					
5.1	10 A, single lever switch	No	225			
5.2	10 A, single lever two way switch	No	10			
5.3	100 x 50mm Blank cover plate (steel)	No	10			
6.	ISOLATORS					
	The supply, installation and connection of isolators in 100 x 100 x 50 mm boxes, complete with cover plate					
6.1	45 A, single pole flush mounted (Stove)	No	16			
6.2	45 A, 3 pole surface mounted (Geysers)	No	16			
	TOTAL CARRIED FORWARD					

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETHU RESIDENCE

PART B: ELECTRICAL INSTALLATION: BUILDING WORK

LIST B2: ELECTRICAL INSTALLATION WORK

Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
	AMOUNT BROUGHT FORWARD					
7.	SOCKET OUTLETS					
	The supply, installation and connecting of socket outlets:					
7.1	Equal or Similar to CBI 100 x 100 socket complete with the following:	No	121			
	1x 16A RSA Socket Outlet					
	1x On/Off Switch					
	3x 16A Slimline 3 Pin Socket Outlet (Euro)					
7.2	16A, Double socket outlet complete with 16A, 1Way switch	No	144			
7.3	100 x 100mm Blank plate for socket outlet (steel)	No	336			
8.	TV POINTS					
	The supply, installation and connecting of TV points:					
8.1	50 ohms coaxial cable	No	8			
8.2	1 x TV Point (100 x 100mm)	No	8			
9.	PHOTO CELL					
	The Supply, installation and connection of:					
9.1	16A Photo Cell mounted in well glass	No	1			
	TOTAL CARRIED FORWARD					

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETHU RESIDENCE

PART B: ELECTRICAL INSTALLATION: BUILDING WORK

LIST B2: ELECTRICAL INSTALLATION WORK

Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
	AMOUNT BROUGHT FORWARD					
10.	LUMINAIRES					
	Supplying, installation and commissioning of the following luminaires complete with lamps.					
10.1	Type A: Outdoor walkway lights IP65 - Equal or Similar to Bergstrom LN 24W LED IP65 Wall Mounted Bulkhead with White Die-cast Aluminium Base and High Impact Acrylic Diffuser. Wired ECG Complete	No	16			
10.2	Type AE: Emergency Outdoor walkway lights IP65 - Equal or Similar to Bergstrom LN 24W LED IP65 Bulkhead with White Die-cast Aluminium Base and High Impact Acrylic Diffuser. Wired ECG Complete	No	6			
10.3	Type B: Ceiling Lights IP65 for Bathrooms - Equal or Similar to Bergstrom LN 24W LED IP65 Bulkhead with White Die-cast Aluminium Base and High Impact Acrylic Diffuser. Wired ECG Complete	No	16			
10.4	Type BE: Emergency Ceiling Lights IP65 for Bath - Equal or Similar to Bergstrom LN 24W LED IP65 Bulkhead with White Die-cast Aluminium Base and High Impact Acrylic Diffuser. Wired ECG Complete	No	26			
10.5	Type C: Ceiling Light for Rooms - Equal or Similar to BRIGHTSTAR CF366 - 22W EPISTAR LED	No	109			
10.6	Type CE: Emergency Ceiling Light - Equal or Similar to BRIGHTSTAR CF366 - 22W EPISTAR LED with 2hr battery backup	No	0			
10.7	Type D: Walkway lights IP65 - Equal or Similar to LASCON ROMA-17.5 LED	No	44			
10.8	Type DE: Emergency Walkway lights IP65 - Equal or Similar to LASCON ROMA-17.5 LED with 2hr battery backup	No	40			
10.9	Type FA: Ceiling Light - Equal or Similar to LASCON SL95-S-46W-LED	No	8			
	TOTAL CARRIED FORWARD					

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETHU RESIDENCE
PART B: ELECTRICAL INSTALLATION: BUILDING WORK
LIST B2: ELECTRICAL INSTALLATION WORK

Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
	AMOUNT BROUGHT FORWARD					
10.10	Type FB: Ceiling Light - Equal or Similar to LASCON M6V-46W-LED	No	18			
10.11	Type FE: Emergency Ceiling Light - Equal or Similar to LASCON M6V-46W-LED with 2hr battery backup	No	6			
10.12	Study Light - BER 14.2W LED Canopy 1 Undercounter Light with Lumeo Diffuser in Saturn Silver. Wired ECG Complete with Tamperproof bolts. (Right Entry): Graham 082 831 3248	No	54			
10.13	Study Light - BER 14.2W LED Canopy 1 Undercounter Light with Lumeo Diffuser in Saturn Silver. Wired ECG Complete with Tamperproof bolts. (Left Entry): Graham 082 831 3248	No	47			
10.14	Type SL: Flood light - Equal or similar to Bergstrom RF 50W LED Floodlight with Die-cast Aluminium Housing and Mounting Bracket. Wired ECG Complete	No	4			
10.15	Type L16: Flood light - Equal or similar to Bergstrom RF 200W LED Floodlight with Die-cast Aluminium Housing and Mounting Bracket. Wired ECG Complete	No	4			
11.	STOVES					
	Supplying, installation and commissioning of 4 Plate Stove Equal or similar to Defy 831 Electric Multifunction Stove - DSS427	No	16			
12.	PANEL HEATER					
	Supplying, installation and commissioning of a 400W wall mounted energy saving paintable panel heater	No	109			
	TOTAL CARRIED FORWARD					

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETHU RESIDENCE
PART B: ELECTRICAL INSTALLATION: BUILDING WORK
LIST B2: ELECTRICAL INSTALLATION WORK

Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
	AMOUNT BROUGHT FORWARD					
13.	GENERAL					
	Supply, installation and commissioning of the following ancilliary equipment.					
13.1	Strip all existing Electrical wiring to Lights, Plugs, Geyser and Stove	Sum	1			
13.2	Bonding of electrical system	Sum	1			
13.3	Test for balancing of electrical installation	Sum	1			
13.4	Commission , test and issue COC for works	No.	5			
13.5	Supply and install traffolite labels per floor on all light switches, plugs, DB boards, circuit breakers etc. with approved lettering	Sum	1			
14	FIRE DETECTION					
	Supply, installation and commissioning of the following fire services equipment.					
14.1	25 mm dia STEEL for fire service lights (installed on surface)	m	700			
14.2	100 x 100 x 50 mm galvanised steel for fire service	No	8			
14.3	200 x 200 x 50 mm galvanised steel for fire services	No	1			
	TOTAL CARRIED FORWARD					

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETHU RESIDENCE
PART B: ELECTRICAL INSTALLATION: BUILDING WORK
LIST B2: ELECTRICAL INSTALLATION WORK

Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
	AMOUNT BROUGHT FORWARD					
14.4	Fire Detectors	No	8			
14.5	Fire Cable (Fire Alarm Services)	m	700			
14.6	Fire Control Panel	No	1			
15	PROVISIONAL AMOUNTS					
15.1	Provisional amount allowed for lightning protection of building by Pontings or HKK Specialists	Sum	1			R 110 000.00
TOTAL CARRIED FORWARD TO SUMMARY OF BILL OF QUANTITIES PAGE B14						

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETHU RESIDENCE
PART B: ELECTRICAL INSTALLATION: BUILDING WORK
LIST C: CABLE WORK

B12

Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
1.	LT CABLES					
	Supply, installation and commissioning of PVC/PVC/SWA/PVC cables with stranded, bare copper earth conductors in cable trenches and cable sleeves (the making off of ends measured elsewhere)					
1.1	25 mm sq, 4 core PVC SWA Cu cable	m	40			
1.2	16 mm sq BCEW	m	40			
1.3	120 sq. mm 1 core PVC insulated (DB VB-A to VB - D supply)	m	60			
1.4	95 sq. mm bare	m	15			
2.	LV CABLE TERMINATIONS					
	Supply, delivery and making off of cable ends complete with cable lugs, labelling, etc for the following sizes of cable.					
2.1	25 mm sq, 4 core PVC SWA Cu cable	No	2			
2.2	16 mm sq BCEW	No	2			
2.3	120 sq. mm PVC insulated	No	8			
2.4	95 sq. mm bare	No	2			
TOTAL CARRIED FORWARD						

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETHU RESIDENCE

PART B: ELECTRICAL INSTALLATION: BUILDING WORK

LIST C: CABLE WORK

Item	Description	Unit	Qty	Unit Labour Rate	Unit Material Rate	Total
	AMOUNT BROUGHT FORWARD					
3.	CABLE TRENCH					
	Excavation, backfilling and consolidation of cable trenches of 600 mm deep x 450 mm wide					
3.1	In earth & soft rock	m	20			
3.2	In hard rock (compressor work)	m	20			
3.3	Remove and re-install paving (1m Wide)	m	40			
4.	BEDDING					
	Supply and installation of a bedding layer per running meter of soft sieved soil in existing					
	trenches as well as backfilling and consolidation	m	40			
5.	DANGER TAPE					
	Supply and installation of danger tape to a depth of 300mm	m	40			
6.	CABLE SLEEVES					
	Supply and installation of the following cable sleeve in ground or entry to distribution boards					
	and at all road crossings.					
6.1	50mm diameter NEXTUBE	m	2			
	TOTAL CARRIED FORWARD TO SUMMARY OF BILL OF QUANTITIES PAGE B14					

BILL OF QUANTITIES: VUT: REFURBISHMENT OF KHAYALETHU RESIDENCE
PART B: ELECTRICAL INSTALLATION: BUILDING WORK
SUMMARY

DESCRIPTION	AMOUNT
LISTA: DISTRIBUTION BOARD FROM PAGE B3	
LIST B: ELECTRICAL INSTALLATION WORK FROM PAGE B11	
LIST C: CABLE WORK FROM PAGE B13	
SUBTOTAL A	
PLUS: 20 % Contingencies (Subtotal A)	
SUBTOTAL B	
PLUS: 5 % Builders Mark-up (Subtotal B)	
SUBTOTAL C (Carry over to BOQ Summary page 136 on Part A:Section 1-3)	
PLUS: 15% VAT	
TOTAL AMOUNT (VAT Inclusive)	

NAME OF COMPANY:

ADDRESS:

TEL:

CELL:

EMAIL:

SIGNED BY:

PRINT NAME:

