

Item No		Quantity	Rate	Amount
	<u>Principal Building Agreement Code 2101 Edition 4.1 March 2005</u>			
	<u>AND PRELIMINARIES Code 2103 May 2005</u>			
	<u>BILL NO. 1</u>			
	<u>PRELIMINARIESNOTES</u>			
i)	The agreement is to be the JBCC Series 2000 Principal Building Agreement, Edition 4.1 May 2005, and other contract documents that together form the contract between the employer and contractor			
ii)	The preliminaries are to be the JBCC Series 2000 Code 2103 Preliminaries prepared by the Joint Building Contracts Committee, May 2005 edition and shall be deemed to be incorporated herein			
iii)	Tenderers are referred to the above mentioned documents for the full intent and meaning of each clause thereof (hereinafter referred to by heading and clause number only) for which such allowance must be made as may be considered necessary			
iv)	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			
v)	Where any item is not relevant to this specific contract such item is marked N/A (signifying "not applicable")			
vi)	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, where "F" denotes a fixed amount (amount not to be varied), "V" denotes an amount variable in proportion to value and "T" denotes an amount in proportion to time			
	Carried to Collection		R	
	Bill No. 1 Preliminaries			

SECTION A: PRINCIPAL BUILDING AGREEMENT

Definitions (A1)

1	Definitions and interpretation (clause 1)	Item
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Objective and Preparation (A2 to A14)

2	Offer acceptance and performance (clause 2)	Item
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3	Documents (clause 3)	Item
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4	Design responsibility (clause 4)	Item
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5	Employer's agents (clause 5)	Item
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6	Site representative (clause 6)	Item
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7	Compliance with regulations (clause 7)	Item
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8	Works risk (clause 8)	Item
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9	Indemnities (clause 9)	Item
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10	Works insurances (clause 10)	Item
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11	Liability insurances (clause 11)	Item
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12	Effecting insurance (clause 12)	Item
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13	NO CLAUSE 13.	N/A
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14	Security (clause 14)	Item
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Execution (A15-A23)

15	Preparation for and execution of the works (clause 15)	Item
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16	Access to the works (clause 16)	Item
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17	Contract instructions (clause 17)	Item
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18	Setting out of the works (clause 18)	Item
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39	Cancellation - cessation of the works (clause 39)	Item
	<u>Dispute (A40)</u>	
40	Dispute Settlement (clause 40)	Item
	<u>Substitute Provisions (A41)</u>	
41	State clauses (Clause 41)	Item
	<u>THE SCHEDULE</u>	
	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)	Item
	<u>42.1 CONTRACTING AND OTHER PARTIES</u>	
	42.1.1 Employer: Development Bank of Southern Africa	
	Postal address: 1258 Lever road, Headway hill, Midrand	
	Code 1658	
	Tel 031 313 3026	
	Fax	
	E-mail vusik3@dbsa.co.za	
	Physical Address:	
	<u>42.2 CONTRACT DETAILS</u>	
	42.2.1 Works Description:	
	Storm damage repairs to existing secondary school	
	42.2.2 Site Description:	
	Existing school at Bhiliya Secondary School	
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- 42.2.3 Work or installations by direct contractors:
- The full scope of works is be carried out by the main contractor with the option of using sub-contractors
- 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:
- to be confirmed in the JBCC agreement
- 42.2.6 Period for the commencement of the works after the contractor takes possession of the site
- to be confirmed in the JBCC agreement
- 42.2.7 For the works **as a whole**. Intended date of practical completeion and the penalty per calendar day
- to be confirmed in the JBCC agreement
- 42.2.8 For the works in **sections**: ??Intended date of practical completion and the penalty per calender day
- to be confirmed in the JBCC agreement
- 42.2.9 The **law** applicable to this **agreement** shall be that of south africa

42.3 INSURANCES

- 42.3.1 Contract works insurance to be effected by:
- Contractor:*
- 42.3.2 Supplementary insurance is requiredto be
- confirmed in the JBCC agreement

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42.3.3 Public liability insurance to be effected by:
Contractor:

42.4 DOCUMENTS

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

to be confirmed in the JBCC agreement

42.4.2 Number of construction document copies to be supplied to the **contractor** free of charge: 3

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

standard system of measuring

42.4.4 On acceptance of the tender the bills of quantities/lump sum document is to be submitted within **working days**

to be confirmed in the JBCC agreement

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

No

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)

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	<u>Documents (B2)</u>		
44	Checking of documents (B2.1)	Item	
45	Provisional bills of quantities (B2.2)	Item	
46	Availability of construction documentation (B2.3)	Item	
47	Interests of agents (B2.4)	Item	
48	Priced documents (B2.5)	Item	
49	Tender submission (B2.6)	Item	
	<u>The site (B3)</u>		
50	Defined works area (B3.1)	Item	
51	Geotechnical investigation (B3.2)	Item	
52	Inspection of the site (B3.3)	Item	
53	Existing premises occupied (B3.4)	Item	
54	Previous work - dimensional accuracy (B3.5)	Item	
55	Previous work - defects (B3.6)	Item	
56	Services - known (B3.7)	Item	
57	Services - unknown (B3.8)	Item	
58	Protection of trees etc (B3.9)	Item	
59	Articles of value (B3.10)	Item	
60	Inspection of adjoining properties etc (B3.11)	Item	
	<u>Management of contract (B4)</u>		
61	Management of the works (B4.1)	Item	
62	Programme for the works (B4.2)	Item	
63	Progress meetings (B4.3)	Item	
64	Technical meetings (B4.4)	Item	
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65	Labour and Plant records (B4.5)	Item
	<u>Samples, Shop Drawings and Manufacturer's Instructions (B5)</u>	
66	Samples of materials (B5.1)	Item
67	Workmanship samples (B5.2)	Item
68	Shop drawings (B5.3)	Item
69	Compliance with Manufacturer's Instructions (B5.4)	Item
	<u>Temporary works and plant (B6)</u>	
70	Deposits and fees (B6.1)	Item
71	Enclosure of the works (B6.2)	Item
72	Advertising (B6.3)	Item
73	Plant, equipment, sheds and offices (B6.4)	Item
74	Main notice board (B6.5)	Item
75	Subcontractors' notice board (B6.6)	Item
	<u>Temporary services (B7)</u>	
76	Location (B7.1)	Item
77	Water (B7.2) to be confirmed in the JBCC agreement	Item
78	Electricity (B7.3) to be confirmed in the JBCC agreement	Item
79	Telecommunication facilities (B7.4)	Item
80	Ablution facilities (B7.5) to be confirmed in the JBCC agreement	Item
	<u>Prime cost amounts (B8)</u>	
81	Responsibility for prime cost amounts (B8.1)	Item
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Schedule of variables (B12)			
100	Pre-tender information (B12.1)	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) Setting out will be pointed out to the contractor		
12.1.5	Geotechnical investigation (B3.2)		
12.1.6	Existing premises occupied (B3.4) The existing building should be protected during construction.		
12.1.7	Previous work - dimensional accuracy (B3.4)		
12.1.8	Previous work - defects (B3.5)		
12.1.9	Services - known (B3.7)		
12.1.10	Protection of trees (B3.9)		
12.1.11 (B3.11)	Inspection of adjoining properties		
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Post tender information (B12.2)

- 12.2.1 Payment of preliminaries
to be confirmed in the JBCC agreement
- 12.2.2 Adjustment of preliminaries
to be confirmed in the JBCC agreement
- 12.2.3 Additional agreed preliminaries items

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Bill No. 1

Preliminaries

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 2</u></p> <p><u>ALTERATIONS (PROVISIONAL)</u></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary items or materials</u></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p><u>View site:</u></p> <p>Before submitting his tender the contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained</p> <p><u>Damage to existing finishes:</u></p> <p>The Contractor will be held responsible for all damage, however caused, to existing finishes and fittings etc. and he must make good all damage at his own expense to the approval of the Principal Agent</p>			
Carried to Collection		R	
Bill No. 2 Alterations (Provisional)			

Breaking down, demolition and alteration activities and tasks, hacking off of existing plaster, etc. is to be executed with care so as to prevent damage to remaining floor and wall surfaces and finishes (where these are to be retained). Tenders will be deemed to include allowance for any necessary protection of existing surfaces and structures as may be necessary to effect the above, as the cost of repairing damage to existing surfaces and structures will be solely for the Contractors account

Responsibility for site:

The contractor is to note that upon possession of the site by himself, and extending until practical completion is achieved, he is solely responsible for the site, site security, general upkeep and cleaning of the site and all other responsibilities in maintaining a construction site in conformance with but not limited to, the Construction Regulations 2003, all local by-laws, all user client regulations, and all Client regulations and procedures. Tenderers are therefore urged to study all available material and to investigate fully the site and areas contiguous to the site, in order to determine the range and extent of responsibility. No additional monetary and/or time claims will be entertained in respect of the above

Explosives :

No explosives whatsoever may be used for demolition purposes unless otherwise stated

General:

The contract shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining classroom blocks and their students. He shall provide proper protection and provide, erect and remove when directed, any temporary tapaulins that may be necessary during the progress of the works, or to the satisfaction of the principal agent

Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the principal agent

Carried to Collection

Bill No. 2
Alterations (Provisional)

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Prices for taking out of doors, windows, etc. shall include for removal of all beads, architraves, ironmongery, etc

Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc. and making good floor and wall finishes to match existing

With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, tops of walls, etc., shall be levelled and prepared for raising of brickwork

Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary

The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc.)

Removal of materials:

Where removal is included in the heading, sub-heading or item description, prices shall be deemed to include for the necessary costs in removal and appropriate disposal of materials including but not limited to labour, transportation and disposal costs. No further claims in this regard will be entertained

Removal of asbestos material:

All preparatory work, alterations, etc., to existing asbestos cement roof sheeting, gutters, rainwater pipes, etc., is to be carried out strictly by an approved and certified specialist company and in accordance with statutory requirements (Occupational Health and Safety Act, 1993 - Asbestos Regulations 2001) and all necessary precautions must be taken when working with and disposing of asbestos cement products and the disposing of waste water resulting from cleaning operations, etc

Carried to Collection

Bill No. 2
Alterations (Provisional)

R

The following shall apply in respect of asbestos removal:

The removal of asbestos shall be carried out by a certified entity, registered in accordance with the Occupational Health and Safety Act 1993 and the Asbestos Regulation 2001. Asbestos in all forms/building elements that is to be removed, shall be carried out in strict accordance with aforementioned regulation, and a certificate issued by the entity as contemplated in the above, shall be provided per block for the removal thereof, where the term block shall in this context refer to any single, free standing building structure, regardless of size or purpose. Corresponding disposal certificates shall be issued by the facility at which the asbestos is disposed off, with said facility to, prior to the disposal of any asbestos material provide satisfactory proof that the facility is duly registered and fully compliant in terms of the act, to receive the asbestos material. Under no circumstances is the contractor nor any of his duly authorised representatives to sell and/or give away asbestos material to any member/s of the school community, the community in general or the public at large. Should this be found to be occurring, the contractor will be held responsible contractually and may further be prosecuted criminally. The cost for complying with the above, and all requirements of regulation as reflected above is to be priced for in the items for removal of asbestos material. No further claims in this regard will therefore be entertained

Carried to Collection

Bill No. 2
Alterations (Provisional)

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The removal of asbestos shall be carried out by a certified entity, registered in accordance with the Occupational Health and Safety Act 1993 and the Asbestos Regulation 2001. Asbestos in all forms/building elements that is to be removed, shall be carried out in strict accordance with aforementioned regulation, and a certificate issued by the entity as contemplated in the above, shall be provided per block for the removal thereof, where the term block shall in this context refer to any single, free standing building structure, regardless of size or purpose. Corresponding disposal certificates shall be issued by the facility at which the asbestos is disposed of, with said facility to, prior to the disposal of any asbestos material provide satisfactory proof that the facility is duly registered and fully compliant in terms of the act, to receive the asbestos material. The cost for complying with the above, and all requirements of regulation as reflected above is to be priced for in the items for removal of asbestos material. No further claims in this regard will therefore be entertained

REMOVAL OF EXISTING WORK

Taking down and removal of Asbestos by Specialist

- | | | | |
|---|--|----|---|
| 1 | Asbestos roof covering 6700 x 5200 x 1500mm high overall including roof covering | No | 1 |
|---|--|----|---|

Taking out and removing doors, windows, etc from brickwork

- | | | | |
|---|--|----|----|
| 2 | Timber single door and frame 900 x 2100mm high | No | 12 |
|---|--|----|----|

Taking down and removing roofs, floors, panelling, ceilings, partitions, etc

- | | | | |
|---|--|---|----|
| 3 | Fibre cement fascias and barge boards including all fixings, etc | m | 85 |
| 4 | 125 x 75mm uPVC Eaves gutter and rainwater pipes | m | 58 |

Taking out and removing ironmongery

- | | | | |
|---|---|----|---|
| 5 | Make good existing glazed steel window approximately 1200mm x 1500mm high including sanding down thoroughly, apply metal primer and two coats gloss enamel paint, overhauling, adjusting and servicing existing ironmongery to leave complete unit in a perfect condition | No | 2 |
|---|---|----|---|

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Bill No. 2
Alterations (Provisional)

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6	Remove existing chalkboards approximately 4800 x 1200mm high, including fixings, etc. and cart off site	No	2		
7	Remove existing pinning board approximately 1800 x 2800mm high, including fixings, etc. and cart off site	No	2		
	<u>Taking out/off and removing sundry metalwork</u>				
8	900 x 2100mm Steel gate	No	2		
	<u>TEMPORARY ROOF PROTECTION</u>				
	<u>The Contractor will be held responsible for all damage, howsoever caused, to finishes inside rooms where the existing roof coverings have been removed and he must make good all damage at his own expense to the approval of the Employer</u>				
9	Cover and maintain existing roofs in a perfectly watertight condition during alterations by means of heavy tarpaulins properly secured and maintained in position to the approval of the Employer and make good all work damaged or disturbed after completion (measured on flat)	m2	35		
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Bill No. 2 Alterations (Provisional)					

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Alterations (Provisional)

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Bill No. 2

Alterations (Provisional)

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<u>BILL NO 3</u>			
<u>EARTHWORKS (PROVISIONAL)</u>			
Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary items or materials</u>			
Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent			
<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>			
<u>Excavation in earth not exceeding 2m deep</u>			
1	Reduced levels under floors	m3	124
2	Trenches	m3	154
3	Holes	m3	2
4	Toilet pit	m3	73
5	Trenches and holes for thickening under surface beds etc	m3	1
<u>Extra over trench and hole excavations in earth for excavation in</u>			
6	Soft rock	m3	32
7	Hard rock	m3	16
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Bill No. 3 Earthworks (Provisional)			

	<u>Extra over all excavations for carting away</u>			
8	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	158	
	<u>Risk of collapse of excavations</u>			
9	Sides of trench and hole excavations not exceeding 1,5m deep	m2	510	
10	Sides of trench and hole excavations exceeding 1.5m and not exceeding 1,5m deep	m2	9	
	<u>Keeping excavations free of water</u>			
11	Keeping excavations free of all water other than subterranean water		Item	
	<u>Earth filling obtained from the excavations (not compacted)</u>			
12	In prescribed stock piles on site	m3	123	
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 90% Mod AASHTO density</u>			
13	Backfilling to trenches, holes, etc	m3	43	
	<u>Earth filling supplied by the contractor compacted to 95% Mod AASHTO density</u>			
14	Under floors, steps, pavings, etc	m3	123	
	<u>Coarse river sand filling supplied by the contractor</u>			
15	Under floors etc	m3	41	
	<u>Compaction of surfaces</u>			
16	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density	m2	823	
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	Bill No. 3 Earthworks (Provisional)			

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Bill No. 3

Earthworks (Provisional)

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Bill No. 3

Earthworks (Provisional)

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<p><u>BILL NO 4</u></p> <p><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>																							
<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary items or materials</u></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p><u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></p> <p><u>10MPa/19mm concrete</u></p> <tr> <td>1</td><td>Surface blinding under footings and bases</td><td>m3</td><td>15</td></tr> <p><u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></p> <p><u>25MPa/19mm concrete</u></p> <tr> <td>2</td><td>Surface beds and thickenings, etc cast in panels on waterproofing</td><td>m3</td><td>6</td></tr> <tr> <td>3</td><td>Strip footings</td><td>m3</td><td>81</td></tr> <tr> <td>4</td><td>Bases</td><td>m3</td><td>1</td></tr> <tr> <td colspan="3"> <p>Carried to Collection</p> <p>Bill No. 4 Concrete, Formwork and Reinforcement</p> </td><td> <p>R</p> </td></tr>				1	Surface blinding under footings and bases	m3	15	2	Surface beds and thickenings, etc cast in panels on waterproofing	m3	6	3	Strip footings	m3	81	4	Bases	m3	1	<p>Carried to Collection</p> <p>Bill No. 4 Concrete, Formwork and Reinforcement</p>			<p>R</p>
1	Surface blinding under footings and bases	m3	15																				
2	Surface beds and thickenings, etc cast in panels on waterproofing	m3	6																				
3	Strip footings	m3	81																				
4	Bases	m3	1																				
<p>Carried to Collection</p> <p>Bill No. 4 Concrete, Formwork and Reinforcement</p>			<p>R</p>																				

REINFORCED CONCRETE

25MPa/19mm concrete

5	Surface beds and thickenings, etc cast in panels on waterproofing	m3	93
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30MPa/19mm concrete

6	Slabs including beams and inverted beams	m3	5
7	Vanity slabs, cupboard slabs, cover slabs, etc	m3	1

TEST BLOCKS

8	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	Sets	17
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CONCRETE SUNDRIES

Finishing top surfaces of concrete smooth with a power float

9	Surface beds, slabs, etc to falls	m2	822
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ROUGH FORMWORK (DEGREE OF ACCURACY III)

Special formwork to soffits

10	Slabs propped up exceeding 1.5m and not exceeding 3m high	m2	46
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Rough formwork to form

11	Opening not exceeding 1m girth through not exceeding 300mm slab	No	10
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MOVEMENT JOINTS ETC

Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces

12	12mm Joints not exceeding 300mm high	m	254
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Bill No. 4
Concrete, Formwork and Reinforcement

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Bill No. 4
Concrete, Formwork and Reinforcement

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Bill No. 4
Concrete, Formwork and Reinforcement

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	<u>BILL NO 5</u> <u>PRECAST CONCRETE</u> Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
	<u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials</u> Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent <u>PRECAST CONCRETE</u> <u>"Wintek" or similar approved modular precast concrete window surrounds etc finished smooth on exposed surfaces including bedding, jointing and pointing</u> Window surrounds are to be built into brick walls and pointed all round on both sides with 10 x 10mm square recessed joints Prices are to include for building in as single units or combinations in patterns of two or more window units and for bedding solid all round in mortar and pointing			
1	300 x 200 x 230mm precast concrete winbloks <u>Precast concrete reinforced finished smooth on expose surfaces including bedding, jointing and pointing</u>	No	54	
2	600 x 600 x 150mm Thick reinforced concrete slab including lifting handles	No	10	
	<p style="text-align: right;">Carried to Summary</p> <p>Bill No. 5 Precast Concrete</p>			R

Item No		Quantity	Rate	Amount
	<u>BILL NO 6</u>			
	<u>MASONRY</u>			
	Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Proprietary items or materials</u>			
	Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent			
	<u>FOUNDATIONS (PROVISIONAL)</u>			
	<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar</u>			
1	Piers	m3	0.1	
2	One brick walls	m2	168	
3	One brick walls of two half brick skins bagged and sealed	m2	102	
	<u>SUPERSTRUCTURE</u>			
	<u>Brickwork of NFP bricks in class II mortar</u>			
4	Piers	m3	0.4	
5	Half brick walls	m2	67	
6	Half brick walls in beamfilling	m2	42	
7	One brick walls of two half brick skins bagged and sealed	m2	877	
	Carried to Collection			
	Bill No. 6 Masonry			
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BRICKWORK SUNDRIES

Brickwork reinforcement

8	75mm Wide reinforcement built in horizontally	m	218
9	150mm Wide reinforcement built in horizontally	m	3,098

Prestressed fabricated lintels

10	110 x 75mm Lintels in lengths not exceeding 3m	m	26
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Turning pieces

11	110mm Wide turning piece to lintels etc	m	18
----	---	---	----

Galvanised hoop iron cramps, ties, etc

12	30 x 1,6mm Roof tie 1,5m long with one end fixed to timber and other end built into brickwork	No	468
----	---	----	-----

Air bricks etc

13	229 x 152mm Clay terracota vermin proof air brick	No	16
----	---	----	----

FACE BRICKWORK

"Corobrik Maize Travertine FBX" or equally approved face bricks pointed with recessed horizontal and vertical joints

14	Extra over brickwork for face brickwork	m2	319
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"Corobrik Fireside Travertine FBX" or equally approved face bricks pointed with recessed horizontal and vertical joints

15	Extra over brickwork for face brickwork	m2	395
16	Extra over brickwork for face brickwork in foundations (Provisional)	m2	94
17	Extra over brickwork for face brickwork in piers	m2	4
18	Extra over brickwork for face brickwork in beamfilling	m2	47
19	Half brick walls pointed on both sides	m2	44

Carried to Collection

Bill No. 6
Masonry

R

20	Extra over brickwork for brick-on-edge header course lintel	m	23		
21	Fair raking cutting	m	81		
22	Extra over brickwork for brick-on-flat header course band	m	2		
23	Fair cutting and fitting around pipe not exceeding 100mm diameter	No	18		
	<u>Brick-on-edge header course copings, sills, etc of "Corobrik Firelight Travertine FBX" or equally approved face bricks pointed with recessed joints on all exposed faces</u>				
24	110mm Wide sill set sloping and slightly projecting	m	86		
	<u>NUTEC-CEMENT/FIBRE-CEMENT WINDOW SILLS</u>				
	<u>Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc</u>				
25	15 x 150mm Wide sills set flat and slightly projecting	m	86		
Carried to Collection					R
Bill No. 6 Masonry					

Bill No. 6

Masonry

COLLECTION

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Amount

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31

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Carried to Summary

R

Bill No. 6
Masonry

[illegible]

JOINT SEALANTS ETC

"Bostik" or equally approved silicone sealing compound

- 5 Applied with a pressure caulking gun sealing around sanitary fittings

m

6

Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc

- 6 5 x 10mm In saw cut joints in floors

m

275

Carried to Collection

R

Bill No. 7
Waterproofing

Bill No. 7

Waterproofing

COLLECTION

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Bill No. 7
Waterproofing

Item No	Quantity	Rate	Amount
<u>BILL NO 8</u>			
<u>ROOF COVERINGS ETC</u>			
Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary items or materials</u>			
Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent			
<u>TROUGHED METAL SHEETING AND ACCESSORIES</u>			
<u>"Chromadek" or equally approved 0.8mm thick ISQ230, Z275 spelter galvanised steel sheeting with "Chromadek" or equally approved finish to both sides and accessories fixed to timber purlins or rails at 1200mm maximum centres</u>			
1	Roof covering with pitch not exceeding 25 degrees	m2	1,071
2	Ridge capping 462mm girth	m	106
3	Side wall flashing 462mm girth	m	3
4	Moulded narrow and broad rib polyethelene filler blocks	m	202
Carried to Collection			R
Bill No. 8 Roof Coverings			

ROOF AND WALL INSULATION

**"Super Sisalation Heavy Industrial Grade 420" or
equally approved - Double sided reflective foil
lamine incorporating layers of kraft paper and
reinforcing scrim, laminated together with low
density polyethylene (293gsm)**

- 5 Insulation laid taut over timber rafters (at approximately
1200mm centres) and fixed concurrent with tiling
battens, purlins, etc

m2

823

Carried to Collection

Bill No. 8
Roof Coverings

R

Bill No. 8

Roof Coverings

COLLECTION

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Amount

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Bill No. 8
Roof Coverings

Item No		Quantity	Rate	Amount
	<p><u>BILL NO 9</u></p> <p><u>CARPENTRY AND JOINERY</u></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>			
	<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary items or materials</u></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p><u>PREFABRICATED ROOF TRUSSES ETC</u></p> <p>The design of the prefabricated roof trusses, bracing and secondary members forming part of the total roof construction shall be prepared by a professional structural engineer (Truss System Engineer) strictly in accordance with SABS 0163 for the design of timber structures.</p> <p>Erection must be carried out as described in "The Erection and Bracing of Timber Roof Trusses" published by the Truss Plate Association of South Africa LTD and the National Timber Research Institute, CSIR</p> <p>Description of roof trusses shall be deemed to include for design, manufacture, supply, hoisting and fixing in position, trimming ends, notching, etc and any adequate temporary bracing during construction to the approval of the engineer, allowance for permanent bracing has been separately</p>			
	<p style="text-align: right;">Carried to Collection</p> <p>Bill No. 9 Carpentry and Joinery</p>		R	

Prefabricated plate nailed timber roof truss construction

The following is applicable in respect of roof trusses:

Trusses are at maximum 1200mm centres
Roof covering is "Chromadek" 0.8mm thick ISQ230 or equally approved, Z275 spelter galvanised steel sheeting on purlins. The references given in the descriptions are to the respective types of trusses detailed on the Architect's drawings annexed to these bills of quantities for tender purposes. The dimensions in the descriptions of the trusses are nominal and actual measurements are to be obtained from the architect and/or the site before design or fabrication commences

1	Double pitch roof truss with a clear span of 2445mm rising 700mm to apex with a eaves overhang of 400mm on both sides all as detailed on the Architectural drawings attached to these bills of quantities	No	5
2	Double pitch roof truss with a clear span of 3820mm rising 800mm to apex with a eaves overhang of 600mm on both sides all as detailed on the Architectural drawings attached to these bills of quantities	No	6
3	Double pitch roof truss with a clear span of 4840mm rising 900mm to apex with a eaves overhang of 600mm on both sides all as detailed on the Architectural drawings attached to these bills of quantities	No	7
4	Double pitch roof truss with a clear span of 6430mm rising 1276mm to apex with a eaves overhang of 600mm on both sides all as detailed on the Architectural drawings attached to these bills of quantities	No	11
5	Double pitch roof truss with a clear span of 7032mm rising 1751mm to apex with a eaves overhang of 600mm on both sides all as detailed on the Architectural drawings attached to these bills of quantities	No	59

ROOFS ETC

Sawn softwood

6	38 x 114mm Wall plates	m	186
7	38 x 114mm Longitudinal bracing	m	356

Carried to Collection

Bill No. 9
Carpentry and Joinery

R

8	50 x 76mm Purlins	m	1,177
9	76 x 76mm Splayed purlins	m	197
<u>Sundries</u>			
10	Two coats creosote on sawn timbers	m2	21
11	600mm Long wrought end to 38 x 114mm sawn timber and splayed cut	No	176
12	"Teco" or equally approved hurricane clips	No	264
13	2.5mm Diameter galvanised wire tie 400mm girth wrapped around rafter and purlin with ends tied together	No	176
<u>EAVES, VERGES, ETC</u>			
<u>"Everite Flexit" or equally approved pressed nutec-cement</u>			
14	12 x 220mm Fascias boards fixed to ends of rafters including galvanised steel H-profile joint strips	m	242
15	12 x 80 x 220mm Angle section barge boards fixed to ends of rafters including galvanised steel H-profile joint strips	m	140
<u>SKIRTINGS</u>			
<u>Wrought meranti</u>			
16	70 x 19mm Skirting nailed	m	296
<u>DOORS ETC</u>			
<u>Flush panel solid doors with "Sapele" or equally approved veneer to both sides hung to steel frames</u>			
17	40mm Thick door size 900 x 2100mm high (D01) all as detailed on the Architectural drawings attached to these bills of quantities	No	19

Carried to Collection

Bill No. 9
Carpentry and Joinery

R

<p>18</p>	<p><u>Flush panel hollow-core door with "Sapele" or equally approved veneer to both sides hung to steel frames</u></p> <p>40mm Thick door size 900 x 2100mm high (D02) all as detailed on the Architectural drawings attached to these bills of quantities</p>	<p>No</p>	<p>23</p>			
<p>Bill No. 9 Carpentry and Joinery</p>	<p>Carried to Collection</p>			<p>R</p>		

Bill No. 9
Carpentry and Joinery
COLLECTION

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Bill No. 9
Carpentry and Joinery

Item No	Quantity	Rate	Amount
<u>BILL NO 10</u> <u>CEILINGS, PARTITIONS AND ACCESS FLOORING</u> Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
<u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials</u> Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent			
<u>NAILED UP CEILINGS</u> <u>6mm "Everite Nutec" or equally approved plain boards with white PVC H-profile jointing strips over joints</u>			
1	Ceilings including 38 x 50mm sawn softwood brandering at 600mm centres with cross brandering at joints, ends of sheets and at light fittings, etc	m2	625
2	Extra over ceiling for 700 x 800mm trap door of wrought softwood rebated framing with one sawn softwood cross brander covered with ceiling board and fitted flush in opening	No	1
<u>"Everite Nutec" or equally approved fibre cement cornices</u>			
3	75mm Coved cornices	m	398
<u>"Isotherm" or equally approved insulation</u>			
4	100mm Insulation closely fitted and laid on top of brandering between roof timbers etc	m2	625
Carried to Summary			R
Bill No. 10 Ceilings, Partitions and Access Flooring			

Item No	Quantity	Rate	Amount
<u>BILL NO 11</u> <u>FLOOR COVERINGS, PLASTIC LININGS, ETC</u> Refer to Standard Preambles to All Trades (WB20) attached to these Bills of Quantities			
<u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials</u> Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent <u>FLOOR COVERINGS</u> <u>300 x 300 x 2.5mm Thick "Floorflex" or equally approved semi-flexible vinyl tiles manufactured in accordance with SANS 581 and laid in FloorworX No. 62 acrylic adhesive spread with a trowel fitted with an A2 notched blade at a rate of between 5.5m2 and 6.5m2 per litre on a previously prepared Class 1 sub floor in accordance with SANS 10070, using FloorworX Self Leveller when required, including all cutting and waste. The flooring must be rolled in both directions with an articulated 68kg three-sectional roller immediately after it has been laid into the adhesive</u>			
1	On floors	m2	625
<u>SKIRTINGS, NOSINGS, ETC</u> <u>"Marley " or equally approved</u>			
2	12mm anodised aluminium edge strip fixed to concrete	m	398
Carried to Collection			R
Bill No. 11 Floor Coverings, Wall Linings, etc			

POLISH, SEALERS, ETC

"Floorworx" or equally approved

3 Strip floor using "Floorworx Stripper", including scrubbing using a diluted solution of "Floorworx Rinse" and seal with three coats of "Floorworx Silk Matt" or "Gloss Sealer"

m2

625

Carried to Collection

Bill No. 11
Floor Coverings, Wall Linings, etc

R

Bill No. 11

Floor Coverings, Wall Linings, etc

COLLECTION

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Bill No. 11

Floor Coverings, Wall Linings, etc

Item No	Quantity	Rate	Amount												
<p><u>BILL NO 12</u></p> <p><u>IRONMONGERY</u></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>															
<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary items or materials</u></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by 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: BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black PB Polished brass PL Polished and lacquered PT Epoxy coated SD Sanded</p> <p><u>HINGES, BOLTS, ETC</u></p> <p><u>"Union" or equally approved</u></p> <table border="1"> <tbody> <tr> <td>1</td><td>100mm Brass hinge</td><td>No</td><td>70</td></tr> <tr> <td>2</td><td>"37651RH" WC indicator bolt with keep fixed to metal</td><td>No</td><td>18</td></tr> <tr> <td>3</td><td>"8052-200" 200 x 19mm Flush bolt with keep let into concrete</td><td>No</td><td>11</td></tr> </tbody> </table>				1	100mm Brass hinge	No	70	2	"37651RH" WC indicator bolt with keep fixed to metal	No	18	3	"8052-200" 200 x 19mm Flush bolt with keep let into concrete	No	11
1	100mm Brass hinge	No	70												
2	"37651RH" WC indicator bolt with keep fixed to metal	No	18												
3	"8052-200" 200 x 19mm Flush bolt with keep let into concrete	No	11												
<p>Carried to Collection</p>			<p>R</p>												
<p>Bill No. 12 Ironmongery</p>															

LOCKS

"Union" or equally approved

4	"2277-103 SS" Three lever lockset	No	8
5	"2277-103 SS" Three lever rebated lockset	No	20

"Viro" or equally approved

6	30mm Padlock	No	21
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HANDLES

"Union" or equally approved

7	"CZ 682-13 CH Gower" Lever handle	No	23
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BATHROOM FITTINGS

"Franke" or equally approved

8	"Rodan RODX619" Steel soap dispenser (2120095) size 200 x 85 x 140mm high plugged and screwed to wall	No	10
9	"BS 603" Wall mounted waste container fixed to wall	No	7
10	"CHRX675" Toilet roll holder fixed to wall	No	18

SUNDRIES

"Union" or equally approved

11	"CZ8731SC" door stop	No	21
----	----------------------	----	----

**PINNING BOARDS, WRITING BOARDS,
PROJECTION SCREENS, ETC**

"Vitrex" or equally approved

12	"System 2000" or equally approved pinning board 1800 x 2800mm high plugged all as detailed on the architectural drawings attached to these bills of quantities	No	10
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Carried to Collection

Bill No. 12
Ironmongery

R

13	<p><u>"Parrot Products" or equally approved</u></p> <p>"BD0976" or equally approved standard magnetic white board 2400 x 1200mm high overall complete with bottom rail, etc plugged</p>	No	10	
<p>Bill No. 12 Ironmongery</p>	<p>Carried to Collection</p>		R	

Bill No. 12
Ironmongery
COLLECTION

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Bill No. 12
Ironmongery

Item No		Quantity	Rate	Amount
	<u>BILL NO 13</u>			
	<u>STRUCTURAL STEELWORK</u>			
	Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Proprietary items or materials</u>			
	Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent			
	<u>GALVANISED STEEL COLUMNS AND BEAMS</u>			
	<u>Welded columns in single lengths embedded in concrete with flat section base, top, bearer and connection plates bolted to concrete including paintwork to Engineer's requirements</u>			
1	102 x 3mm Thick circular hollow section posts	t	1.66	
	<u>Welded column capping</u>			
2	5mm thick x 160mm high Galvanized steel capping welded together on and including rubber weather stripping fixed to 230mm diameter concrete column, including 5mm thick galvanized steel bracket fixed on column capping and to timber beam all as detailed on the Architectural drawings attached to these bills of quantities	No	23	
	<u>Bolts to beams, etc</u>			
3	M12 (Grade 8.8) bolt	No	92	
4	M8 (Grade 8.8) bolt	No	92	
	Carried to Summary			
	Bill No. 13 Structural Steelwork			
			R	

Item No		Quantity	Rate	Amount
	<u>BILL NO 14</u>			
	<u>METALWORK</u>			
	Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Proprietary items or materials</u>			
	Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent			
	<u>WELDED GALVANISED SCREENS, GATES, ETC</u>			
	<u>Screens and gates</u>			
1	Stainless steel industrial type gate overall size 1200 x 2100mm high all as detailed on the architectural drawings attached to these bills of quantities	No	21	
	<u>GALVANISED PRESSED STEEL DOOR FRAMES</u>			
	<u>NOTE:</u>			
	All door frames to be fitted with one and a half pair chromium plated on steel, brass butts with double nylon washers for each door leaf unless otherwise described and chromium plated striking plates			
	<u>1,2mm Double rebated frames suitable for half brick walls</u>			
2	Frame for door 900 x 2100mm high	No	14	
	<u>1,2mm Double rebated frames suitable for one brick walls</u>			
3	Frame for door 900 x 2100mm high	No	16	
	Carried to Collection			
	Bill No. 14 Metalwork		R	

GALVANIZED STEEL WINDOWS, DOORS, ETC

NOTE:

All windows shall be fitted standard brass fittings as recommended by the manufacturer

Burglar bars shall be standard pattern 5 x 20mm flat section bars corresponding horizontally and vertically with glazing bars

Burglar bars shall be fitted to opening sections only

Standard industrial windows (unpainted) including burglar bars

4	Window size 1302 x 1445mm high (SS43) all as detailed on the architectural drawings attached to these bills of quantities	No	32
5	Window size 1025 x 1449mm high (SS21) all as detailed on the architectural drawings attached to these bills of quantities	No	1
6	Window size 1302 x 1250mm high (SS42) all as detailed on the architectural drawings attached to these bills of quantities	No	2
7	Window size 1302 x 511mm high (SS41) all as detailed on the architectural drawings attached to these bills of quantities	No	24
8	Window size 988 x 978mm high (SS32) all as detailed on the architectural drawings attached to these bills of quantities	No	7
9	Window size 988 x 511mm high (W13) all as detailed on the architectural drawings attached to these bills of quantities	No	2

Carried to Collection

R

Bill No. 14
Metalwork

STEEL ROLLER SHUTTERS ETC

Colour coated roller shutters fixed to brickwork

- 10 "Seranda" or equally approved roller shutter (RSD 01) for 2200 x 1567mm high opening all as detailed on the Architectural drawings attached to these bills of quantities

No

1

STEEL STRONGROOM DOORS, VENTILATORS, ETC

"Chubb" or equally approved strongroom doors etc suitable for 230mm walls fixed to brickwork or concrete

- 11 "Chubb Monitor" or equally approved strongroom door and frame 1120 x 2199mm high overall all as detailed on the Architectural drawings attached to these bills of quantities

No

1

Carried to Collection

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Bill No. 14
Metalwork

Bill No. 14

Metalwork

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Bill No. 14
Metalwork

Item No		Quantity	Rate	Amount
	<u>BILL NO 15</u>			
	<u>PLASTERING</u>			
	Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Proprietary items or materials</u>			
	Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent			
	<u>SCREEDS</u>			
	<u>Screeds wood floated on concrete</u>			
1	25mm Thick on floors and landings	m2	635	
	<u>GRANOLITHIC</u>			
	<u>Untinted granolithic on concrete</u>			
2	30mm Thick on floors and landings	m2	16	
3	Skirting 75mm high	m	21	
	<u>INTERNAL PLASTER</u>			
	<u>Cement plaster on brickwork</u>			
4	On walls	m2	892	
5	On narrow widths	m2	30	
	Carried to Collection			
	Bill No. 15 Plastering			
			R	

AIR GRATINGS

- 6 235 x 157mm White plastic plain pattern air grating fixed flush with plaster face

No

16

EPOXY FLOORING

Apply epoxy primer and 2mm self levelling epoxy (StonKonte 723 or similar approved) according to manufactures instructions

- 7 20mm Thick on floors

m2

52

Carried to Collection

R

Bill No. 15
Plastering

Bill No. 15

Plastering

COLLECTION

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Amount

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Bill No. 15
Plastering

Item No		Quantity	Rate	Amount
	BILL NO 16 <u>PLUMBING AND DRAINAGE (PROVISIONAL)</u> Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
	<u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials</u> Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent <u>SOIL DRAINAGE</u> <u>Class 34 uPVC pipes</u>			
1	110mm Pipes laid in and including trenches not exceeding 1m deep	m	36	
2	110mm Pipes laid in and including trenches exceeding 1m and not exceeding 2m deep	m	21	
	<u>Extra over uPVC pipes for fittings</u>			
3	110mm Bend	No	10	
4	110mm Junction	No	8	
5	110mm Access pipe	No	13	
6	110mm Access bend	No	10	
	Carried to Collection		R	
	Bill No. 16 Plumbing and Drainage (Provisional)			

RAINWATER DISPOSAL

0.8mm Seamless aluminium

7	125 x 75mm Ogee eaves gutters	m	256
8	Extra over eaves gutter for stopped end	No	32
9	Extra over eaves gutter for angle	No	44
10	Extra over eaves gutter for outlet for 100mm pipe	No	32
11	Extra over rainwater pipe for bend	No	64
12	Extra over rainwater pipe for shoe	No	36
13	125 x 75mm Rainwater pipes	m	83

SANITARY FITTINGS

"Vaal" or equally approved

14	510 x 405mm "Hibiscus" wash hand basin (7023), white colour with two tap configuration bolted to wall using 1 x 2 x 8mm bolts (8448ZO)	No	7
15	595 x 455mm "Cameo" vanity basin (7028), white colour with two tap configuration installed as per manufacturers requirements	No	2

"Atlas" or equally approved

16	"VIP 200" pedestal with seat and lid (colour granite) code 101235 size 387 x 518mm high with foot piece and VIP 200 inlet funnel - 224, inserted in concrete cover slab of pit	No	10
----	--	----	----

"Franke" or equally approved

17	"Trendline" 1200 x 535 double end bowl drop on sink code 1030009 with two 343 x 410 x 140mm deep bowls fitted onto cupboard	No	1
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"Avenge" or equally approved

18	Concrete wash trough (code 2400611Q)	No	3
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Carried to Collection

Bill No. 16
Plumbing and Drainage (Provisional)

R

WASTE UNIONS ETC

"Cobra" or equally approved

19	"Code - 316" 40mm CP sink waste union with plug, chain and back nut	No	1
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TRAPS ETC

"Marley" or equally approved

20	38mm Deep seal "P" or "S" trap	No	10
----	--------------------------------	----	----

"Cobra Watertech" or equally approved

21	32mm 340 CP bottle trap including C-342/1 with tail pipe, C-342/2 capnut and C-342/3 wall flange	No	9
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TAPS, VALVES, ETC

Brass

22	22mm Bibcock with hose union	No	11
----	------------------------------	----	----

23	28mm Stopcock	No	11
----	---------------	----	----

24	28mm Fullway gate valve	No	9
----	-------------------------	----	---

25	28mm Non-return valve	No	9
----	-----------------------	----	---

"Cobra" or equally approved

26	106/15 CP toilet bibtap	No	9
----	-------------------------	----	---

27	"Code - 401" or equally approved CP Basin set comprising one pair 15mm "Star" pillar taps including basin waste plug (Code - 301) or equally approved with chain, stay and backnut	No	9
----	--	----	---

28	266/041/10 1/2 Sink mixer including C-362/2 capnut and C-362/3 wall flange, stays and backnuts	No	1
----	--	----	---

Carried to Collection

Bill No. 16
Plumbing and Drainage (Provisional)

R

SANITARY PLUMBING

uPVC pipes

29	50mm Pipes	m	42
----	------------	---	----

30	110mm Pipes	m	23
----	-------------	---	----

Extra over uPVC pipes for fittings

31	50mm Bend	No	11
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32	50mm Access bend	No	11
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33	50mm Access junction	No	18
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34	110mm Access bend	No	19
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35	110mm End cap	No	12
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36	110mm Pan connector	No	18
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37	110mm Access reducing junction	No	10
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38	110mm Air vent cowl	No	10
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39	50mm "GI Two-way" vent valve	No	10
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Sundries

40	Testing waste pipe system		Item
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WATER SUPPLIES

"Polylink" or equally approved polypropylene pipes

41	28mm Pipes laid in and including trenches	m	22
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Extra over "Polylink" or equally approved polypropylene pipes for fittings

42	28mm End cap	No	15
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43	28mm Reducer	No	22
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44	28mm Bend	No	28
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Carried to Collection

Bill No. 16
Plumbing and Drainage (Provisional)

R

45	28mm Tee	No	20
	<u>Class 1 copper pipes</u>		
46	15mm Pipes	m	18
47	22mm Pipes	m	22
48	15mm Pipes chased into brick walls	m	12
49	22mm Pipes chased into brick walls	m	10
	<u>Extra over class 1 copper pipes for capillary fittings</u>		
50	15mm Fittings	No	15
51	22mm Fittings	No	12
	<u>Copper overflow and service pipes</u>		
52	15mm Bent service pipe average 450mm girth and joint to copper and fittings	No	9
	<u>ELECTRIC WATER HEATERS</u>		
	<u>"Franke" or equally approved</u>		
53	"Zip" 5 litre stainless steel hydroboil size 318 x 150 x 460mm high (product code 2610009)	No	1
	<u>"Kwikot" or equally approved</u>		
54	"Kwiksol (Sol-150-Dir)" 150 Litre horizontal solar water heater complete with drip tray including "Kwiksol (Sol-Panel-2B)" solar collector panel	No	1
Carried to Collection			R
Bill No. 16 Plumbing and Drainage (Provisional)			

Bill No. 16
Plumbing and Drainage (Provisional)
COLLECTION

Total Brought Forward from Page No.

Page No	Amount
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61	
62	
63	
64	
65	

Carried to Summary

R

Bill No. 16
Plumbing and Drainage (Provisional)

Item No		Quantity	Rate	Amount
	<u>BILL NO 17</u> <u>GLAZING</u> Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
	<u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials</u> Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent <u>GLAZING TO STEEL WITH PUTTY</u> Note: Tenderers are referred to architect's drawings annexed to these bill of quantities. Glazing to conform with "The South African Glass & Glazing Association (SAGGA)" and shall comply with the National Building Regulations and Building Standards Act 103 of 1977 and SANS 10137 Code of Practice for the Installation of Glazing in Buildings <u>6mm Clear toughened safety glass puttied in with steel window putty as per SANS 10400:N</u>			
1	Panes exceeding 0,1m2 and not exceeding 0,5m2 <u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u> <u>6mm Silvered float glass copper backed mirrors with polished edges holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete</u>	m2	87	
2	Mirror 550 x 550mm high	No	8	
	Carried to Summary			R
	Bill No. 17 Glazing			

Item No	Quantity	Rate	Amount
<p><u>BILL NO 18</u></p> <p><u>PAINTWORK</u></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary items or materials</u></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p><u>PREPARATORY WORK TO EXISTING WORK</u></p> <p><u>Previously painted plastered surfaces</u></p> <p>Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth</p> <p><u>PAINTWORK ETC TO PREVIOUSLY PAINTED WORK</u></p> <p><u>ON FLOATED PLASTER</u></p> <p><u>Prepare surfaces and remove all loose material, apply one coat "Plascon or equally aproved Professional Plaster Prime (PP700)" thinned 20% and two coats "Plascon Egg Shell Enamel (PSB700)" paint</u></p>			
1	On internal walls	m2	249
<p>Carried to Collection</p>			R
<p>Bill No. 18 Paintwork</p>			

	<u>Prepare surfaces and remove all loose material, apply one coat "Plascon or equally aproved Professional Plaster Prime (PP700)" thinned 20% and two coats "Plascon Egg Shell Enamel (PSB700)" paint</u>			
2	On external walls	m2	268	
	<u>ON WOOD</u>			
	<u>Prepare surfaces and remove all loose material, apply one coat "Plascon Merit Plaster Primer or equally aproved" and two coats "Plascon Velvagio Polyurethane Enamel or equally aproved" paint</u>			
3	On trusses	m2	147	
	<u>PAINTWORK ETC TO NEW WORK</u>			
	<u>ON FLOATED PLASTER</u>			
	<u>Prepare surfaces and remove all loose material, apply one coat "Plascon or equally aproved Professional Plaster Prime (PP700)" thinned 20% and two coats "Plascon Egg Shell Enamel (PSB700)" paint</u>			
4	On internal walls	m2	912	
	<u>ON FIBRE-CEMENT</u>			
	<u>Prepare surfaces and remove all loose material, apply one coat "Plascon Merit Plaster Primer or equally aproved" and two coats "Plascon Velvagio Polyurethane Enamel or equally aproved" paint</u>			
5	On ceilings and cornices	m2	625	
6	On fascias and barge boards	m2	38	
	<u>ON METAL</u>			
	<u>One coat primer, one undercoat and two coats "Dulux Easigloss D189-0734" gloss enamel paint (Colour to be approved by Project Manager)</u>			
7	On door frames	m2	15	
Carried to Collection				R
Bill No. 18 Paintwork				

ON WOOD

**Spot, sand down and prepare wood surfaces and
apply three coats "Plascon Woodcare Woodcoat
Polyurethane or equally aproved" matt clear varnish**

8 On doors

m2

159

Carried to Collection

Bill No. 18
Paintwork

R

Bill No. 18

Paintwork

COLLECTION

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No**

68

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70

Amount

Carried to Summary

R

Bill No. 18
Paintwork

Item No	Quantity	Rate	Amount
<u>BILL NO 19</u> <u>ELECTRICAL WORK (PROVISIONAL)</u>			
<u>THE FOLLOWING TO THE GUARD HOUSE</u> <u>Lighting, Small and Main Power Requirements</u> <u>Lighting Requirements</u> <u>CONDUIT</u> Supply and install PVC conduit and accessories including,adaptors,couplings jointing, saddles cutting,bending,fixing and waste in concrete,ceiling,surface on walls or brickwork. All conduit work to be chased on to the wall surface.			
1	20mm diameter	m	40
Note: Drilling of structure is not permitted withouts the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remdial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to ' HILTI ' shot type fixings.			
<u>CONDUIT BOXES</u> Supply and install conduit boxes for 20mm conduit with 1, 2, 3 or 4 way side entries, and or back entry including conduit connection. Allowance to be made for chasing of boxes on the wall surface.			
<u>ROUND BOXES</u>			
2	60mm PVC.	No	8
<u>PVC WIRING CONDUCTORS</u> Supply and install PVC insulated copper conductors as specified drawn into conduit.			
Carried to Collection			R
Bill No. 19 Electrical Installation (Provisional)			

3	1.5mm2 (red)	m	40
4	1.5mm2 (black)	m	40
5	2.5mm2 (green)	m	40

LIGHT SWITCHES - Crabtree Classic Range

Supply and install 240 Volt flush mounted light switch complete with PVC cover plate and all fixings. Price to include for engraving on cover plate and conduit boxes

6	16 Amp 1 Lever 1 way.	No	1
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LIGHT FITTINGS

The supply, installation and termination of luminaires as indicated on the drawings and specification. All fittings shall be as indicated in the luminaire schedule. All fluorescent shall have cool white lamps.

NOTE : All roof mounted fittings to have a 5 A SSO for supply connection and hanging chains for mounting onto steel trusses.

7	Type "f" (2 x 24 W T8 LED)	No	1
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8	Type "e" (1 x 20 W LED bulkhead luminaire)	No	2
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Small Power Requirements

Supply, install, connect, test and commission the complete small power installation as described in the specification and as described below,

CONDUIT

Flush mounted PVC conduit chased to walls. The price is to include for cutting, bending, setting, joining, and any other materials necessary for the successful completion of the installation.

9	20 mm DIA PVC conduit	m	35
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Carried to Collection

Bill No. 19
Electrical Installation (Provisional)

R

Note: Drilling of structure is not permitted without the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remedial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to ' HILTI ' shot type fixings.

WIRING

Supply and installation of PVC copper conductors as specified drawn into conduit.

10	1.5mm ² (red)	m	35
11	1.5mm ² (black)	m	35
12	2.5mm ² (green)	m	35

CONDUIT BOXES

Supply and install conduit boxes for 20mm conduit with 1, 2, 3 or 4 way side entries, and or back entry including conduit connection. Allowance to be made for chasing of boxes on the wall surface.

ROUND BOXES

13	60mm PVC.	No	5
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SWITCHED SOCKET OUTLETS - EURO TYPE (CRABTREE CLASSIC RANGE)

Supply and install 16 Amp 240 volt flush mounted euro switch socket outlets complete with all fixings in conduit box as well as the socket outlet box and cover.

14	Single Euro, 16 Amp, 3-pin, flush mounted combo outlet	No	2
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ISOLATORS

Supply and installation of single phase isolators complete with accessories, boxes and covers.

15	1-phase, 20 A flush mounted hydroboil isolator	No	1
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Carried to Collection

R

Bill No. 19
Electrical Installation (Provisional)

Main Power Requirements

DISTRIBUTION BOARDS

Allow for the inspection testing and service, repair or replacement of the affected distribution board complete with similar equipment as was originally,pre-fitted in the factory and all accessories. Installation shall include all fixings, earthing and conduit termination as per specification.

NOTE: DB shall include lightning protection and surge suppression equipment and shall be sized accordingly.

16	DB-GUARD	No	1		
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PHOTOCELL

Supply and install photo electric devices complete with accessories.

17	Photocell	No	1		
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EARTHING AND BONDING

18	Install general earthing and bonding for metal structures,distribution boards, etc, in accordance with the drawings and specifications			Item	
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TESTING AND COMMISSIONING

19	Conduct testing and commissioning of the electrical installation in accordance with the drawings and specifications.			Item	
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THE FOLLOWING TO ADMIN AND 3 CLASSROOM BLOCK

CONDUIT

Supply and install PVC conduit and accessories including,adaptors,couplings jointing, saddles cutting,bending,fixing and waste in concrete,ceiling,surface on walls or brickwork. All conduit work to be chased on to the wall surface.

20	20mm diameter	m	400		
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Carried to Collection

R

Bill No. 19
Electrical Installation (Provisional)

Note: Drilling of structure is not permitted without the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remedial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to ' HILTI ' shot type fixings.

CONDUIT BOXES

Supply and install conduit boxes for 20mm conduit with 1, 2, 3 or 4 way side entries, and or back entry including conduit connection. Allowance to be made for chasing of boxes on the wall surface.

ROUND BOXES

21	60mm PVC.	No	30
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PVC WIRING CONDUCTORS

Supply and install PVC insulated copper conductors as specified drawn into conduit.

22	1.5mm ² (red)	m	420
23	1.5mm ² (black)	m	420
24	2.5mm ² (green)	m	420

LIGHT SWITCHES - Crabtree Classic Range

Supply and install 240 Volt flush mounted light switch complete with PVC cover plate and all fixings. Price to include for engraving on cover plate and conduit boxes

25	16 Amp 1 Lever 1 way.	No	7
26	16 Amp 1 Lever 2 way.	No	2

LIGHT FITTINGS

The supply, installation and termination of luminaires as indicated on the drawings and specification. All fittings shall be as indicated in the luminaire schedule. All fluorescent shall have cool white lamps.

NOTE : All ceiling flush mounted fittings to have a 5 A SSO for supply connection.

Carried to Collection

R

Bill No. 19
Electrical Installation (Provisional)

27	Type "b" (2 x 18 W T8 LED)	No	8																				
28	Type "f" (2 x 24 W T8 LED)	No	13																				
29	Type "e" (1 x 20 W LED bulkhead luminaire)	No	8																				
30	Type "c" (2 x 18 T8 LED vapour proof)	No	2																				
31	Type "SL" (1 x 9 W Emergency Strobe Light)	No	1																				
<p><u>Small Power Requirements</u></p> <p>Supply, install, connect, test and commission the complete small power installation as described in the specification and as described below,</p> <p><u>CONDUIT</u></p> <p>Flush mounted PVC conduit chased to walls. The price is to include for cutting, bending, setting, joining, and any other materials necessary for the successful completion of the installation.</p> <tr> <td>32</td> <td>20 mm DIA PVC conduit</td> <td>m</td> <td>250</td> </tr> <tr> <td colspan="4"> <p>Note: Drilling of structure is not permitted without the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remedial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to ' HILTI ' shot type fixings.</p> <p><u>WIRING</u></p> <p>Supply and installation of PVC copper conductors as specified drawn into conduit.</p> <tr> <td>33</td> <td>1.5mm2 (red)</td> <td>m</td> <td>300</td> </tr> <tr> <td>34</td> <td>1.5mm2 (black)</td> <td>m</td> <td>300</td> </tr> <tr> <td>35</td> <td>2.5mm2 (green)</td> <td>m</td> <td>300</td> </tr> </td> </tr>				32	20 mm DIA PVC conduit	m	250	<p>Note: Drilling of structure is not permitted without the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remedial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to ' HILTI ' shot type fixings.</p> <p><u>WIRING</u></p> <p>Supply and installation of PVC copper conductors as specified drawn into conduit.</p> <tr> <td>33</td> <td>1.5mm2 (red)</td> <td>m</td> <td>300</td> </tr> <tr> <td>34</td> <td>1.5mm2 (black)</td> <td>m</td> <td>300</td> </tr> <tr> <td>35</td> <td>2.5mm2 (green)</td> <td>m</td> <td>300</td> </tr>				33	1.5mm2 (red)	m	300	34	1.5mm2 (black)	m	300	35	2.5mm2 (green)	m	300
32	20 mm DIA PVC conduit	m	250																				
<p>Note: Drilling of structure is not permitted without the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remedial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to ' HILTI ' shot type fixings.</p> <p><u>WIRING</u></p> <p>Supply and installation of PVC copper conductors as specified drawn into conduit.</p> <tr> <td>33</td> <td>1.5mm2 (red)</td> <td>m</td> <td>300</td> </tr> <tr> <td>34</td> <td>1.5mm2 (black)</td> <td>m</td> <td>300</td> </tr> <tr> <td>35</td> <td>2.5mm2 (green)</td> <td>m</td> <td>300</td> </tr>				33	1.5mm2 (red)	m	300	34	1.5mm2 (black)	m	300	35	2.5mm2 (green)	m	300								
33	1.5mm2 (red)	m	300																				
34	1.5mm2 (black)	m	300																				
35	2.5mm2 (green)	m	300																				
Carried to Collection			R																				
Bill No. 19 Electrical Installation (Provisional)																							

CONDUIT BOXES

Supply and install conduit boxes for 20mm conduit with 1, 2, 3 or 4 way side entries, and or back entry including conduit connection. Allowance to be made for chasing of boxes on the wall surface.

ROUND BOXES

36	60mm PVC.	No	20
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METAL POWER SKIRTING

Supply and install 2-compartment power skirting complete with accessories and all fixings, as per specification and detailed on drawings.

37	2-compartment metal power skirting	m	20
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POWER SKIRTING OUTLETS AS CRABTREE CLASSIC RANGE

38	Supply, install and connect power skirting 16 A white euro combo switched socket complete with accessories as per specification.	No	6
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39	Supply and install power skirting punched coverplate complete with Cat.5 flush mounted RJ45 data outlets as per specification.	No	4
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SWITCHED SOCKET OUTLETS - EURO TYPE (CRABTREE CLASSIC RANGE)

Supply and install 16 Amp 240 volt flush mounted euro switch socket outlets complete with all fixings in conduit box as well as the socket outlet box and cover.

40	Single Euro, 16 Amp, 3-pin, flush mounted combo outlet	No	4
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Carried to Collection

R

Bill No. 19
Electrical Installation (Provisional)

Main Power Requirements

DISTRIBUTION BOARDS

Allow for the supply and installation of breakers, isolators and earth leakage devices on the existing main distribution board located inside the main LV room. Installation shall include all fixings, earthing and conduit terminations as per the specification and drawings.

NOTE: LV DB shall include lightning protection and surge suppression equipment and shall be sized accordingly.

41	DB-MAIN	No	1
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PHOTOCELL

Supply and install photo electric devices complete with accessories.

42	Photocell	No	1
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EARTHING AND BONDING

43	Install general earthing and bonding for metal structures,distribution boards, etc, in accordance with the drawings and specifications		Item
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TESTING AND COMMISSIONING

44	Conduct testing and commissioning of the electrical installation in accordance with the drawings and specifications.		Item
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THE FOLLOWING TO 5 CLASSROOM BLOCK

CONDUIT

Supply and install PVC conduit and accessories including,adaptors,couplings jointing, saddles cutting,bending,fixing and waste in concrete,ceiling,surface on walls or brickwork. All conduit work to be chased on to the wall surface.

45	20mm diameter	m	300
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Carried to Collection

R

Bill No. 19
Electrical Installation (Provisional)

Note: Drilling of structure is not permitted without the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remedial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to ' HILTI ' shot type fixings.

CONDUIT BOXES

Supply and install conduit boxes for 20mm conduit with 1, 2, 3 or 4 way side entries, and or back entry including conduit connection. Allowance to be made for chasing of boxes on the wall surface.

ROUND BOXES

46	60mm PVC.	No	30
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PVC WIRING CONDUCTORS

Supply and install PVC insulated copper conductors as specified drawn into conduit.

47	1.5mm ² (red)	m	350
48	1.5mm ² (black)	m	350
49	2.5mm ² (green)	m	350

LIGHT SWITCHES - Crabtree Classic Range

Supply and install 240 Volt flush mounted light switch complete with PVC cover plate and all fixings. Price to include for engraving on cover plate and conduit boxes

50	16 Amp 1 Lever 1 way.	No	5
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LIGHT FITTINGS

The supply, installation and termination of luminaires as indicated on the drawings and specification. All fittings shall be as indicated in the luminaire schedule. All fluorescent shall have cool white lamps.

NOTE : All roof mounted fittings to have a 5 A SSO for supply connection and hanging chains for mounting onto steel trusses.

Carried to Collection

Bill No. 19
Electrical Installation (Provisional)

R

51	Type "f" (2 x 24 W T8 LED)	No	20		
52	Type "e" (1 x 20 W LED bulkhead luminaire)	No	8		
<u>Small Power Requirements</u>					
Supply, install, connect, test and commission the complete small power installation as described in the specification and as described below,					
<u>CONDUIT</u>					
Flush mounted PVC conduit chased to walls. The price is to include for cutting, bending, setting, joining, and any other materials necessary for the successful completion of the installation.					
53	20 mm DIA PVC conduit	m	200		
Note: Drilling of structure is not permitted without the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remedial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to ' HILTI ' shot type fixings.					
<u>WIRING</u>					
Supply and installation of PVC copper conductors as specified drawn into conduit.					
54	2.5 mm ² (red)	m	220		
55	2.5mm ² (black)	m	220		
56	4mm ² (green)	m	220		
<u>CONDUIT BOXES</u>					
Supply and install conduit boxes for 20mm conduit with 1, 2, 3 or 4 way side entries, and or back entry including conduit connection. Allowance to be made for chasing of boxes on the wall surface.					
<u>ROUND BOXES</u>					
57	60mm PVC.	No	15		
Carried to Collection				R	
Bill No. 19					
Electrical Installation (Provisional)					

**SWITCHED SOCKET OUTLETS - EURO TYPE
(CRABTREE CLASSIC RANGE)**

Supply and install 16 Amp 240 volt flush mounted euro switch socket outlets complete with all fixings in conduit box as well as the socket outlet box and cover.

58	Single Euro, 16 Amp, 3-pin, flush mounted combo outlet	No	10
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Main Power Requirements

DISTRIBUTION BOARDS

Supply,deliver,off load and install the following Distribution Boards and Telephone DB including equipment,pre-fitted in the factory complete all accessories. Installation shall include all fixings, earthing and conduit terminations as per the specification and drawings.

NOTE: LV DB shall include lightning protection and surge suppression equipment and shall be sized accordingly and the telephone DB shall include cardboard base.

59	DB-5C BLOCK C	No	1
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PHOTOCELL

Supply and install photo electric devices complete with accessories.

60	Photocell	No	1
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EARTHING AND BONDING

61	Install general earthing and bonding for metal structures,distribution boards, etc, in accordance with the drawings and specifications		Item
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TESTING AND COMMISSIONING

62	Conduct testing and commissioning of the electrical installation in accordance with the drawings and specifications.		Item
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Carried to Collection

R

Bill No. 19
Electrical Installation (Provisional)

THE FOLLOWING TO THE KITCHEN

CONDUIT

Supply and install PVC conduit and accessories including,adaptors,couplings jointing, saddles cutting,bending,fixing and waste in concrete,ceiling,surface on walls or brickwork. All conduit work to be chased on to the wall surface.

63	20mm diameter	m	150
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Note: Drilling of structure is not permitted withouts the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remdial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to ' HILTI ' shot type fixings.

CONDUIT BOXES

Supply and install conduit boxes for 20mm conduit with 1, 2, 3 or 4 way side entries, and or back entry including conduit connection. Allowance to be made for chasing of boxes on the wall surface.

ROUND BOXES

64	60mm PVC.	No	12
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PVC WIRING CONDUCTORS

Supply and install PVC insulated copper conductors as specified drawn into conduit.

65	1.5mm2 (red)	m	200
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66	1.5mm2 (black)	m	200
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67	2.5mm2 (green)	m	200
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LIGHT SWITCHES - Crabtree Classic Range

Supply and install 240 Volt flush mounted light switch complete with PVC cover plate and all fixings. Price to include for engraving on cover plate and conduit boxes

68	16 Amp 1 Lever 1 way.	No	5
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Carried to Collection

Bill No. 19
Electrical Installation (Provisional)

R

69	16 Amp 1 Lever 2 way.	No	2		
	<u>LIGHT FITTINGS</u>				
	The supply, installation and termination of luminaires as indicated on the drawings and specification. All fittings shall be as indicated in the luminaire schedule. All fluorescent shall have cool white lamps.				
	NOTE : All ceiling flush mounted fittings to have a 5 A SSO for supply connection.				
70	Type "c" (2 x 18 T8 LED vapour proof)	No	2		
71	Type "f" (2 x 24 W T8 LED)	No	3		
72	Type "e" (1 x 20 W LED bulkhead luminaire)	No	4		
	<u>Small Power Requirements</u>				
	Supply, install, connect, test and commission the complete small power installation as described in the specification and as described below,				
	<u>CONDUIT</u>				
	Flush mounted PVC conduit chased to walls. The price is to include for cutting, bending, setting, joining, and any other materials necessary for the successful completion of the installation.				
73	32mm DIA PVC conduit	m	200		
	Note: Drilling of structure is not permitted without the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remedial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to ' HILTI ' shot type fixings.				
	<u>WIRING</u>				
	Supply and installation of PVC copper conductors as specified drawn into conduit.				
74	2.5 mm ² (red)	m	250		
75	2.5mm ² (black)	m	250		
	Carried to Collection			R	
	Bill No. 19 Electrical Installation (Provisional)				

76	4mm ² (green)	m	250		
	<u>CONDUIT BOXES</u>				
	Supply and install conduit boxes for 20mm conduit with 1, 2, 3 or 4 way side entries, and or back entry including conduit connection. Allowance to be made for chasing of boxes on the wall surface.				
	<u>ROUND BOXES</u>				
77	60mm PVC.	No	10		
	<u>SWITCHED SOCKET OUTLETS - EURO TYPE (CRABTREE CLASSIC RANGE)</u>				
	Supply and install 16 Amp 240 volt flush mounted euro switch socket outlets complete with all fixings in conduit box as well as the socket outlet box and cover.				
78	Single Euro, 16 Amp, 3-pin, flush mounted combo outlet	No	4		
79	Double, 16 Amp, 3-pin, flush mounted outlet	No	2		
	<u>Main Power Requirements</u>				
	<u>DISTRIBUTION BOARDS</u>				
	Supply, deliver, off load and install the following Distribution Boards and Telephone DB including equipment, pre-fitted in the factory complete all accessories. Installation shall include all fixings, earthing and conduit terminations as per the specification and drawings.				
	NOTE: LV DB shall include lightning protection and surge suppression equipment and shall be sized accordingly and the telephone DB shall include cardboard base.				
80	DB-KITCHEN	No	1		
	<u>PHOTOCELL</u>				
	Supply and install photo electric devices complete with accessories.				
81	Photocell	No	1		
	Carried to Collection				
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				R	

EARTHING AND BONDING

- 82 Install general earthing and bonding for metal structures, distribution boards, etc, in accordance with the drawings and specifications

Item

TESTING AND COMMISSIONING

- 83 Conduct testing and commissioning of the electrical installation in accordance with the drawings and specifications.

Item

THE FOLLOWING TO 2 CLASSROOM BLOCK

CONDUIT

Supply and install PVC conduit and accessories including, adaptors, couplings jointing, saddles cutting, bending, fixing and waste in concrete, ceiling, surface on walls or brickwork. All conduit work to be chased on to the wall surface.

- 84 20mm diameter

m

200

Note: Drilling of structure is not permitted without the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remedial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to 'HILTI' shot type fixings.

CONDUIT BOXES

Supply and install conduit boxes for 20mm conduit with 1, 2, 3 or 4 way side entries, and or back entry including conduit connection. Allowance to be made for chasing of boxes on the wall surface.

ROUND BOXES

- 85 60mm PVC.

No

10

PVC WIRING CONDUCTORS

Supply and install PVC insulated copper conductors as specified drawn into conduit.

- 86 1.5mm² (red)

m

250

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87	1.5mm2 (black)	m	250
88	2.5mm2 (green)	m	250

LIGHT SWITCHES - Crabtree Classic Range

Supply and install 240 Volt flush mounted light switch complete with PVC cover plate and all fixings. Price to include for engraving on cover plate and conduit boxes

89	16 Amp 1 Lever 1 way.	No	2
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LIGHT FITTINGS

The supply, installation and termination of luminaires as indicated on the drawings and specification. All fittings shall be as indicated in the luminaire schedule. All fluorescent shall have cool white lamps.

NOTE : All ceiling flush mounted fittings to have a 5 A SSO for supply connection.

90	Type "f" (2 x 24 W T8 LED)	No	8
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91	Type "e" (1 x 20 W LED bulkhead luminaire)	No	6
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Small Power Requirements

Supply, install, connect, test and commission the complete small power installation as described in the specification and as described below,

CONDUIT

Flush mounted PVC conduit chased to walls. The price is to include for cutting, bending, setting, joining, and any other materials necessary for the successful completion of the installation.

92	20mm DIA PVC conduit	m	100
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Note: Drilling of structure is not permitted without the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remedial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to ' HILTI ' shot type fixings.

Carried to Collection

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WIRING

Supply and installation of PVC copper conductors as specified drawn into conduit.

93	2.5 mm2 (red)	m	120
94	2.5mm2 (black)	m	120
95	4mm2 (green)	m	120

CONDUIT BOXES

Supply and install conduit boxes for 20mm conduit with 1, 2, 3 or 4 way side entries, and or back entry including conduit connection. Allowance to be made for chasing of boxes on the wall surface.

ROUND BOXES

96	60mm PVC.	No	10
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**SWITCHED SOCKET OUTLETS - EURO TYPE
(CRABTREE CLASSIC RANGE)**

Supply and install 16 Amp 240 volt flush mounted euro switch socket outlets complete with all fixings in conduit box as well as the socket outlet box and cover.

97	Single Euro, 16 Amp, 3-pin, flush mounted combo outlet	No	4
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Main Power Requirements

DISTRIBUTION BOARDS

Supply,deliver,off load and install the following Distribution Boards and Telephone DB including equipment,pre-fitted in the factory complete all accessories. Installation shall include all fixings, earthing and conduit terminations as per the specification and drawings.

NOTE: LV DB shall include lightning protection and surge suppression equipment and shall be sized accordingly and the telephone DB shall include cardboard base.

98	DB-2C BLOCK E	No	1
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Carried to Collection

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R

<u>PHOTOCELL</u>					
Supply and install photo electric devices complete with accessories.					
99	Photocell	No	1		
<u>EARTHING AND BONDING</u>					
100	Install general earthing and bonding for metal structures,distribution boards, etc, in accordance with the drawings and specifications		Item		
<u>TESTING AND COMMISSIONING</u>					
101	Conduct testing and commissioning of the electrical installation in accordance with the drawings and specifications.		Item		
<u>THE FOLLOWING TO TOILET BLOCKS</u>					
<u>CONDUIT</u>					
Supply and install PVC conduit and accessories including,adaptors,couplings jointing, saddles cutting,bending,fixing and waste in concrete,ceiling,surface on walls or brickwork. All conduit work to be chased on to the wall surface.					
102	20mm diameter	m	60		
Note: Drilling of structure is not permitted withouts the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remdial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to ' HILTI ' shot type fixings.					
<u>CONDUIT BOXES</u>					
Supply and install conduit boxes for 20mm conduit with 1, 2, 3 or 4 way side entries, and or back entry including conduit connection. Allowance to be made for chasing of boxes on the wall surface.					
<u>ROUND BOXES</u>					
103	60mm PVC.	No	5		
Carried to Collection				R	
Bill No. 19 Electrical Installation (Provisional)					

PVC WIRING CONDUCTORS

Supply and install PVC insulated copper conductors as specified drawn into conduit.

104	1.5mm2 (red)	m	80
105	1.5mm2 (black)	m	80
106	2.5mm2 (green)	m	80

LIGHT SWITCHES - Crabtree Classic Range

Supply and install 240 Volt flush mounted light switch complete with PVC cover plate and all fixings. Price to include for engraving on cover plate and conduit boxes

107	16 Amp 1 Lever 1 way.	No	2
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LIGHT FITTINGS

The supply, installation and termination of luminaires as indicated on the drawings and specification. All fittings shall be as indicated in the luminaire schedule. All fluorescent shall have cool white lamps.

NOTE : All ceiling flush mounted fittings to have a 5 A SSO for supply connection.

108	Type "c" (2 x 18 T8 LED vapour proof)	No	1
109	Type "e" (1 x 20 W LED bulkhead luminaire)	No	4

Main Power Requirements

CONDUIT

Supply and install PVC conduit and accessories including,adaptors,couplings jointing, saddles cutting,bending,fixing and waste in concrete,ceiling,surface on walls or brickwork. All conduit work to be chased on to the wall surface.

110	20mm diameter	m	60
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Carried to Collection

Bill No. 19
Electrical Installation (Provisional)

R

Note: Drilling of structure is not permitted without the prior approval of the Engineer. Any drilling of the structure without the approval of the Engineer will result in the cost of all necessary remedial work and / or replacement of structural members to be charged to the contractor's account. The above also applies to 'HILTI' shot type fixings.

CONDUIT BOXES

Supply and install conduit boxes for 20mm conduit with 1, 2, 3 or 4 way side entries, and or back entry including conduit connection. Allowance to be made for chasing of boxes on the wall surface.

ROUND BOXES

111	60mm PVC.	No	5
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PVC WIRING CONDUCTORS

Supply and install PVC insulated copper conductors as specified drawn into conduit.

112	1.5mm ² (red)	m	80
113	1.5mm ² (black)	m	80
114	2.5mm ² (green)	m	80

LIGHT SWITCHES - Crabtree Classic Range

Supply and install 240 Volt flush mounted light switch complete with PVC cover plate and all fixings. Price to include for engraving on cover plate and conduit boxes

115	16 Amp 1 Lever 1 way.	No	3
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LIGHT FITTINGS

The supply, installation and termination of luminaires as indicated on the drawings and specification. All fittings shall be as indicated in the luminaire schedule. All fluorescent shall have cool white lamps.

NOTE : All ceiling flush mounted fittings to have a 5 A SSO for supply connection.

116	Type "c" (2 x 18 T8 LED vapour proof)	No	2
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Carried to Collection

Bill No. 19
Electrical Installation (Provisional)

R

117	Type "e" (1 x 20 W LED bulkhead luminaire)	No	4	
	<u>PHOTOCELL</u>			
	Supply and install photo electric devices complete with accessories.			
118	Photocell	No	1	
	<u>EARTHING AND BONDING</u>			
119	Install general earthing and bonding for metal structures,distribution boards, etc, in accordance with the drawings and specifications		Item	
	<u>TESTING AND COMMISSIONING</u>			
120	Conduct testing and commissioning of the electrical installation in accordance with the drawings and specifications.		Item	
	<u>Main LV Reticulation</u>			
	<u>ELECTRICAL CABLES (ECC TYPE Cables)</u>			
	Supply and install the following cables running in in ground, trays, between LV distribution board, the meter boxes and the sub distribution baords.			
121	6 mm2 2C PVC/SWA/ECC/Cu	m	80	
122	10 mm2 2C PVC/SWA/ECC/Cu	m	20	
123	16 mm2 2C PVC/SWA/ECC/Cu	m	25	
	<u>SLEEVES</u>			
	Supply and install below indivated sleeves and accessories. Sleeves to be buried in the ground where the street lighting cabling crosses road surfaces.			
124	110 mm diameter	m	50	
125	50 mm diameter	m	100	
	Carried to Collection			R
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CABLE TERMINATIONS

Supply and install cable terminations complete with gland, lugs and other accessories.

126	6 mm ² 2C	No	4
127	10 mm ² 2C	No	2
128	16 mm ² 2C	No	2

TRENCHING

Allow for the trenching and installation of cable sleeves for running electrical cables between the main DB and sub distribution boards

129	Trenching	m	95
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ELECTRICAL MANHOLES

130	Allow for the construction of electrical manholes by building contractor complete with stainless steel covers as per specification and drawings	Item	
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CABLE MARKINGS

131	Supply and install concrete cable markers with aluminium inlays to indicate direction of cable runs.	Item	
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DISMANTLING AND REMOVAL OF REDUNDANT ELECTRICAL EQUIPMENT

132	Allow for the removal and safe disposal of redundant electrical infrastructure as directed by the engineer.	Item	
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Lightning Protection and Earthing Requirements

LIGHTNING PROTECTION SYSTEM

133	Supply and installation of external lightning protection equipment required in the selected blocks that make up the Bhiliya Primary School complete with components and accessories as specified in drawings.	Item	
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Carried to Collection

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TESTING AND COMMISSIONING

134 Testing and commissioning the lightning protection installation in accordance with the drawings and Specification. The testing and issuing of SABS Compliant. Test Certificate to be done by Registered SABS Specialist Contractor.

Item

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COLLECTION

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Electrical Installation (Provisional)

COLLECTION

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Amount

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Item No		Quantity	Rate	Amount
	<p><u>BILL NO 20</u></p> <p><u>EXTERNAL WORK</u></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>			
	<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary items or materials</u></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p><u>DEMOLITIONS</u></p> <p><u>GENERAL NOTES</u></p> <p>Demolitions, etc. shall be deemed to include for the removal of all rubble, debris, etc. from the site to a dumping-site to be found by the contractor.</p> <p>Demolition to proceed in stages during construction period.</p> <p><u>Old materials to become the property of the contractor</u></p> <p>Old materials from alterations, except where described to be re-used or handed over, become the property of the contractor.</p> <p><u>Old materials to be carted away</u></p> <p>Old materials from alterations, except where described to be re-used or handed over, as well as all rubbish, etc. must be regularly carted from the site and not be allowed to accumulate on or around the site.</p>			
	<p style="text-align: right;">Carried to Collection</p> <p>Bill No. 20 External Works (Provisional)</p>		R	

Old materials not to be re-used

Non of the old materials from alterations are to be used for new work, except where specifically described being set-aside for re-use.

Handing over materials

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 property stored by the contractor, until handing over thereof. The contractor must obtain an official receipt listing the materials or articles and dates 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 hi 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.

Existing Buildings / Occupied

Tenderers attention is drawn to the fact that the existing premises is presently occupied by the Staff, who will have the right to take out and remove their own furniture, fixtures and fittings, before handing the building to the contractor.

Existing Furniture, Fittings, Equipment, etc

The contractor shall not remove or damage any furniture, fittings, equipment, etc unless otherwise indicated, and extreme care should be exercised not to damage any existing items. items to be removed would be indicated as such in this Bills of Quantities, and it will in these instances be the responsibility of the contractor to protect and secure these items against damage or theft.

Items to be removed, moved or disposed

Items to be removed, moved or disposed of by the contractor would be indicated as such in this Bills of Quantities, and it will in these instances be the responsibility of the contractor to protect and secure these items against damage or theft.

Carried to Collection

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External Works (Provisional)

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Disconnection of services

The electrical installation, air-conditioning, telephone systems and fittings shall not be disconnected or disturbed in any way by the contractor, but due notice shall be given to the Principal Agent who would make the necessary arrangements for the removal, alterations, etc. thereto. The contractor will be liable for any damage to this work and shall make some good at his own expense.

Electrical - Mechanical - or airconditioning installation

The removal of, and alterations to, the electrical, mechanical or airconditioning instalation shall be executed by the Electrical sub-contractor or a specialist contractor appointed by the contractor.

Light fittings, plug boxes and light switches will, where indicated by the Principal Agent, be taken down/out by the sub-contractor. The wires will also be drawn by the sub-contractor.

All the fitings, wires, etc will be handed to the Principal Agent.

Care to avoid structural or other damage

In taking down and removing existing work the utmost care shall be observed to avoid any structural or other damage to the remaining portions of the building. The contractor shall cover up and protect injury all work not removed and shall make good at his own expense any damage that may occur.

Care to/of existing surfaces, structures and finishes

All work must be done carefully so as not to damage or harm any existing adjoining surfaces. Any damage that occurs will be repaired to be the same as the original at the contractors expense.

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Dimensions and heights

The contractor is advised to check all dimensions and heights affecting the existing buildings on site against those indicated on the plans, as he will be held responsible for all new work being in the correct sizes. Should any discrepancies be found, he is to refer them to the Principal Agent for correction, before proceeding with the work.

Prices for demolitions

Prices for the demolition of any portion of the structure shall include for its demolition complete with all surfaces finishes such as plaster, screeds, etc, all attached items of joinery such as skirtings and all reinforcements, conduiting, pipes, lintels, etc. built into that portion of the structure.

Prices for the removal of doors and frames shall include for removal of fanlights, ironmongery, architraves and other associated trim.

Prices for the removal of windows shall include for the removal of glass, louvres, buglar bars attached to the window, window sills and blinds.

Prices for the removal of sanitary fittings shall include for the removal of all pipework, traps, brackets and fittings.

Demolishing and removing

1	Single storey existing building (Block B) with pitched roof overall area 88m ² on plan including all necessary items, grubbing out foundations, etc all as detailed on the Architectural drawings	No	1
2	Single storey existing building (Block A) with pitched roof overall area 212m ² on plan including all necessary items, grubbing out foundations, etc all as detailed on the Architectural drawings	No	1
3	Single storey existing building (Block C) with pitched roof overall area 337m ² on plan including all necessary items, grubbing out foundations, etc all as detailed on the Architectural drawings	No	1

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SITE CLEARANCE ETC

Site clearance

4	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	180
5	Stripping average 100mm thick layer of top soil and stockpiling on site	m2	180

BULK EXCAVATION, FILLING, ETC

Open face excavation in earth over sloping site

6	Open face excavation	m3	480
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Extra over bulk excavation in earth for excavation in

7	Soft rock	m3	48
8	Hard rock	m3	24

THE FOLLOWING TO ASSEMBLY AREA

Earthworks

9	Excavate to form platform under parking areas etc and depositing excavated material to a dumping site to be located by the Contractor	m3	38
10	Excavate for trenches ne 2m deep	m3	6

Keeping excavations free of water

11	Keeping excavations free of all water other than subterranean water	Item	
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Earth filling obtained from the excavations

12	Rip, scarify as necessary and compact natural ground or excavated surfaces for a depth of 150mm compacted to 90% Mod AASHTO density	m3	38
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Carried to Collection

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Bill No. 20
External Works (Provisional)

<u>Earth filling supplied by the contractor under pavings etc</u>			
13	Rip, scarify as necessary and compact natural ground or excavated surfaces for a depth of 150mm compacted to 90% Mod AASHTO density to minimum G9 quality maximum density	m3	38
<u>Coarse river sand filling supplied by the contractor</u>			
14	Under floors etc	m3	5
<u>Compaction of surfaces</u>			
15	Compaction of ground surface under pavings etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density	m2	252
<u>Soil insecticide</u>			
16	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	252
<u>Prescribed density tests on filling</u>			
17	In-situ dry density (sand replacement) test in accordance with method A10 (a) of TMH 1	No	2
18	Maximum dry density and optimum moisture content test in accordance with method A7 of TMH 1	No	2
19	Atterberg limits test in accordance with methods A2 to A4 of TMH1	No	2
<u>Concrete, Formwork & Reinforcement</u>			
20	25MPa/19mm Reinforced concrete in ground beams	m3	6
21	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	Sets	1
22	Steel reinforcement of various diameters to concrete work	t	0.88
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	<u>One layer of 250 micron "Consol Plastics Gunplas USB Green or equally aproved" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape or equally aproved"</u>				
23	Under pavings	m2	252		
	<u>Paving</u>				
24	60mm thick pavers laid brick on edge in single rows	m2	252		
	<u>THE FOLLOWING TO WALKWAYS</u>				
	<u>Earthworks</u>				
25	Excavate to form platform under parking areas etc and depositing excavated material to a dumping site to be located by the Contractor	m3	30		
26	Excavate for trenches ne 2m deep	m3	20		
	<u>Keeping excavations free of water</u>				
27	Keeping excavations free of all water other than subterranean water			Item	
	<u>Earth filling obtained from the excavations</u>				
28	Rip, scarify as necessary and compact natural ground or excavated surfaces for a depth of 150mm compacted to 90% Mod AASHTO density	m3	30		
	<u>Earth filling supplied by the contractor under pavings etc</u>				
29	Rip, scarify as necessary and compact natural ground or excavated surfaces for a depth of 150mm compacted to 90% Mod AASHTO density to minimum G9 quality maximum density	m3	30		
	<u>Coarse river sand filling supplied by the contractor</u>				
30	Under floors etc	m3	4		
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	External Works (Provisional)				

<u>Compaction of surfaces</u>					
31	Compaction of ground surface under pavings etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density	m2	198		
<u>Soil insecticide</u>					
32	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	198		
<u>Prescribed density tests on filling</u>					
33	In-situ dry density (sand replacement) test in accordance with method A10 (a) of TMH 1	No	2		
34	Maximum dry density and optimum moisture content test in accordance with method A7 of TMH 1	No	2		
35	Atterberg limits test in accordance with methods A2 to A4 of TMH1	No	2		
<u>One layer of 250 micron "Consol Plastics Gunplas USB Green or equally aproved" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape or equally aproved"</u>					
36	Under pavings	m2	198		
<u>Concrete, Formwork & Reinforcement</u>					
37	30MPa/19mm Reinforced concrete in surface beds laid in panels	m3	26		
38	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	Sets	2		
39	Finishing top surfaces of concrete smooth with a power float	m2	198		
40	10mm Expansion joints not exceeding 300mm high between vertical concrete and brick surfaces	m	56		
41	Smooth formwork to edges, risers, ends and reveals not exceeding 300mm high or wide	m	267		
Carried to Collection				R	
Bill No. 20 External Works (Provisional)					

42	Type 193 fabric reinforcement in concrete surface beds, slabs, etc	m2	198		
43	One layer of 250 micron "Consol Plastics Gunplas USB Green or equally aproved" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape or equally aproved" under pavings	m2	198		
	<u>Precast concrete finished smooth on exposed surfaces including bedding, jointing and pointing</u>				
44	Kerb (fig 10) 100 x 250mm high with 150 x 150 x 300mm unreinforced 15MPa concrete haunching at back of each joint including excavation, backfilling, etc	m	267		
	<u>THE FOLLOWING TO V-DRAINS</u>				
	<u>Earthworks</u>				
45	Excavation in earth not exceeding 2m deep for reducing levels under floors	m3	41		
46	Keeping excavations free of all water other than subterranean water		Item		
47	Coarse river sand supplied by the contractor under floors etc	m3	20		
48	In-situ dry density (sand replacement) test in accordance with method A10 (a) of TMH 1	No	6		
49	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 98% Mod AASHTO density	m2	409		
50	Soil poisoning under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	409		
	<u>Concrete, Formwork & Reinforcement</u>				
51	20MPa/19mm Reinforced concrete in surface beds laid in panels	m3	41		
52	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	Sets	6		
	Carried to Collection				
	Bill No. 20			R	
	External Works (Provisional)				

53	Finishing top surfaces of concrete smooth with a wood float	m2	409
54	10mm Expansion joints not exceeding 300mm high between vertical concrete and brick surfaces	m	397
55	Smooth formwork to edges, risers, ends and reveals not exceeding 300mm high or wide	m	421
56	Type 193 fabric reinforcement in concrete surface beds, slabs, etc	m2	409
57	One layer of 250 micron "Consol Plastics Gunplas USB Green or equally aproved" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape or equally aproved" under pavings	m2	409

THE FOLLOWING TO PARKING AREA AND DRIVEWAY

Earthworks

58	Excavate to form platform under parking areas etc and depositing excavated material to a dumping site to be located by the Contractor	m3	55
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Keeping excavations free of water

59	Keeping excavations free of all water other than subterranean water	Item	
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Earth filling supplied by the contractor under pavings etc

60	Rip, scarify as necessary and compact natural ground or excavated surfaces for a depth of 150mm compacted to 90% Mod AASHTO density to minimum G9 quality maximum density	m3	55
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Earth filling supplied by the contractor under pavings etc

61	150mm Thick earth filling of G2 quality supplied by the contractor compacted to 95% Mod AASHTO density	m3	55
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Carried to Collection

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	<u>Coarse river sand filling supplied by the contractor</u>				
62	Under floors etc	m3	7		
	<u>Compaction of surfaces</u>				
63	Compaction of ground surface under pavings etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density	m2	366		
	<u>Soil insecticide</u>				
64	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	366		
	<u>Prescribed density tests on filling</u>				
65	In-situ dry density (sand replacement) test in accordance with method A10 (a) of TMH 1	No	5		
66	Maximum dry density and optimum moisture content test in accordance with method A7 of TMH 1	No	5		
67	Atterberg limits test in accordance with methods A2 to A4 of TMH1	No	5		
	<u>One layer of 250 micron "Consol Plastics Gunplas USB Green or equally aproved" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape or equally aproved"</u>				
68	Under pavings	m2	366		
	<u>Vibro 25 Mpa Industrial Interlock concrete pavers or equally aproved colour Grey (Code: INDINT2), size 220 x 100 x 80mm thick, manufactured in accordance with SANS 1058: 2012 laid in herringbone pattern in accordance with SANS 1200 MJ and CMA Concrete Block Paving Manuals, with a minimum longitudinal fall of 1% on a traverse fall of at least 2% on 25mm compacted sand bed with fine jointing sand swept and vibrated into joints, all laid on sub grade conforming to SANS 1200 D Degree of Accuracy I. Paving to be inspected and re-sanded after three months</u>				
69	80mm thick pavers	m2	366		
	Carried to Collection			R	
	Bill No. 20				
	External Works (Provisional)				

	<u>Precast concrete finished smooth on exposed surfaces including bedding, jointing and pointing</u>				
70	Kerb (fig 10) 100 x 250mm high with 150 x 150 x 300mm unreinforced 15MPa concrete haunching at back of each joint including excavation, backfilling, etc	m	122		
	<u>THE FOLLOWING TO MAIN ENTRANCE WALL</u>				
	<u>Earthworks</u>				
71	Excavation in earth not exceeding 2m deep for trenches	m3	8		
72	Extra over trench and hole excavations in earth for excavation in soft rock	m3	2		
73	Extra over trench and hole excavations in earth for excavation in hard rock	m3	1		
74	Risk of collapse of excavations to sides of trench and hole excavations not exceeding 1,5m deep	m2	13		
75	Keeping excavations free of all water other than subterranean water		Item		
76	Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 90% Mod AASHTO density for backfilling to trenches, holes, etc	m3	4		
	<u>Concrete, Formwork & Reinforcement</u>				
77	25MPa/19mm Unreinforced concrete in strip footings	m3	3		
78	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	Sets	1		
	<u>Masonry</u>				
79	Brickwork of NFX bricks in one brick walls in foundations	m2	7		
80	Brickwork of NFP bricks in one brick walls in superstructure	m2	34		
81	Extra over brickwork for face brickwork in foundations in "Corobrik Fireside Travertine FBX or equally aproved" (Provisional)	m2	4		
	Carried to Collection			R	
	Bill No. 20				
	External Works (Provisional)				

82	Extra over brickwork for face brickwork in "Corobrik Fireside Travertine FBX or equally aproved"	m2	35		
83	12mm Bitumen impregnated fibre board built in vertically between brick skins	m2	3		
84	Brick on edge coping on top of one brick wall in "Corobrik Fireside Travertine FBX or equally aproved"	m	16		
<u>Gates</u>					
85	Single gate size 1000 x 1900mm high hot dipped galvanised steel coated with fusion bond epoxy powder welded mesh all as detailed on the Architectural drawings attached to these Bills of Quantities	No	1		
<u>TANKS, ETC.</u>					
<u>Polyethylene water storage tanks</u>					
86	5000 Litres Jo-jo rainwater tank or similar approved, with 75mm Diameter opening for downpipe from gutter including 50mm Diameter overflow opening with 4mm Diameter galvanised wire looped through top of tank isolated with 15mm diameter hose to top of tank and anchored to top of slab with 'Hilti' hooks drilled into slab at all four corners and 15mm hose bib tap	No	2		
<u>Tank stand</u>					
87	Excavation in earth not exceeding 2m deep to reduce levels	m3	14		
88	Risk of collapse of sides of trench and hole excavations not exceeding 1,5m deep	m2	4		
89	Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk) off site to be located by the contractor	m3	2		
90	Backfilling to trenches, holes, etc., with ditto	m3	4		
91	Keeping excavations free of all water other than subterranean water		Item		
92	Reinforced concrete Class 25/19 in surface beds	m3	4		
93	Reinforced concrete Class 25/19 in strip footings	m3	5		
Carried to Collection				R	
Bill No. 20 External Works (Provisional)					

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Bill No. 20
External Works (Provisional)
COLLECTION

Total Brought Forward from Page No.

**Page
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Carried to Summary

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Bill No. 20
External Works (Provisional)

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FINAL SUMMARY				
Bill No		Page No		Amount
1	Preliminaries	13		
2	Alterations (Provisional)	20		
3	Earthworks (Provisional)	24		
4	Concrete, Formwork and Reinforcement	28		
5	Precast Concrete	29		
6	Masonry	33		
7	Waterproofing	36		
8	Roof Coverings	39		
9	Carpentry and Joinery	44		
10	Ceilings, Partitions and Access Flooring	45		
11	Floor Coverings, Wall Linings, etc	48		
12	Ironmongery	52		
13	Structural Steelwork	53		
14	Metalwork	57		
15	Plastering	60		
16	Plumbing and Drainage (Provisional)	66		
17	Glazing	67		
18	Paintwork	71		
19	Electrical Installation (Provisional)	96		
20	External Works (Provisional)	111		
21	Provisional Sums	112		
	Sub-total Excluding Vat		R	
	Carried Forward		R	

Bill No		Page No	Amount
	Brought Forward		R
	<u>ADD CONTINGENCIES</u>		
	Allow 5% for contingencies which shall be applied to the work as directed by the Project Manager and deducted in whole or part if not required		R
	Sub-total Excluding Vat		R
	Add 15% Value Added Tax		R
	Carried to Form of Tender		R