

THABOTONA FARM PS

IMPLEMENTING AGENT



BILLS OF QUANTITIES

RFP 066/2022

Revision-03

17-August-2023

CONFIDENTIAL

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 1</u></p> <p><u>PRELIMINARIES</u></p> <p><u>MEANING OF TERMS "TENDER / TENDERER"</u></p> <p>Any reference to the words "Tender" or "Tenderer" herein and / or in any other documentation shall be construed to have the same meaning as the words "Bid" or "Bidder".</p> <p><u>PRELIMINARIES</u></p> <p>The JBCC Preliminaries Code 2103, May 2005 edition for use with the JBCC Principal Building Agreement Edition 4.1 Code 2101, March 2005 is taken to be incorporated herein. The tenderer is deemed to have referred to these documents for the full intent and meaning of each clause. These clauses are referred to by number and heading only. Where standard clauses or options are not applicable to the contract such modifications or corrections as are necessary are given under each relevant clause. Where an item is not relevant to this specific contract such item is marked "N/A" signifying "Not Applicable".</p> <p><u>PRICING OF PRELIMINARIES</u></p> <p>Should Option A, as set out in clause B10.3.1 hereinafter be used for the adjustment of preliminaries then each item priced is to be allocated to one or more of the three categories Fixed, Value Related or Time Related and the respective amounts entered in the spaces provided under each item</p> <p>Items not priced in these Preliminaries shall be deemed to be included elsewhere in these Bills of Quantities.</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 1 PRELIMINARIES Bill No. 1 PRELIMINARIES</p>			<p style="text-align: right;">R</p>

SECTION A: JBCC PRINCIPAL BUILDING AGREEMENT

DEFINITIONS

A1 DEFINITIONS AND INTERPRETATION

Clause 1.0

Clause 1.0 is amended by the addition of the following clauses:

1.5.7 References to any party to this agreement include its successors or permitted assigns;

1.5.8 References to the contractor include the obligations of its personnel;

1.5.9 References to "month" shall be to a calendar month;

1.5.10 References to any amount shall mean that amount exclusive of VAT, unless the amount expressly includes VAT;

1.5.11 References containing terms such as "best endeavours" when used in connection with an obligation either party, means taking in good faith and with due diligence all reasonable steps to achieve the objective and fulfil the obligation at the earliest possible time, including doing all that a reasonable and prudent owner or provider of design and construction services in comparable circumstances would do.

1.5.12 If a definition imposes substantive rights and obligations on a party, such rights and obligations shall be given effect to and shall be enforceable, notwithstanding they are contained in a definition;

1.5.13 Where any word is defined within the context of any particular clause in this agreement, that word, unless is clear from the clause in question that word has limited application only to the relevant clause, shall bear the meaning ascribed to it for all purposes in terms of this agreement, notwithstanding that word has not been defined in clause 1.1;

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1.5.14 Words defined in this agreement shall bear the same meanings in any annexes or schedules to this agreement unless the annexes or schedules contain their own definitions of such words;

1.5.15 Where any number of days is prescribed, those shall be reckoned exclusively of the first and inclusively the last day unless the last day falls on a day that is not working day, in which event the last day shall be the next succeeding working day;

1.5.16 Words and abbreviations that have well known technical or trade meanings are used in the agreement in accordance with such recognized meanings;

1.5.17 The rule of construction that if general words or terms are used in association with specific words or terms that are a species of a particular genus or class, the meaning of the general words or terms shall be restricted that same class shall not apply, and whenever the word "including" is used followed by specific examples, such examples shall not be interpreted so as to limit the meaning of any word or term to the same genus or class as the examples given;

1.5.18 The rule of construction that the agreement shall be interpreted against or to the disadvantage of the party responsible for the drafting or preparation of this agreement shall not apply.

1.10 The copyright in all **contract documents, contract drawings** and records (irrespective of who prepared any of the aforesaid) related in any manner to the **works** shall vest in the **employer** and the **contractor** shall not furnish any information in connection with the **works** to any person or organization without the prior written approval of the **employer** to this effect other than subcontractors appointed for purposes of this **agreeme**

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1.11 Any provision in this agreement that is or may become illegal, invalid or unenforceable in any jurisdiction shall be ineffective to the extent of such prohibition or unenforceability in such jurisdiction and shall be treated as severed from the balance of this agreement in such jurisdiction, without invalidating the remaining provisions this agreement in such jurisdiction or affecting it in any other jurisdiction

Fixed: _____ Value related: _____ Time related: _____

OBJECTIVE AND PREPARATION

1 **A2 OFFER, ACCEPTANCE AND PERFORMANCE**

Clause 2.0

Fixed: _____ Value related: _____ Time related: _____

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2 **A3 DOCUMENTS**

Clause 3.0

Clause 3.5 is amended by replacing it with the following:

No clause

Clause 3.7 is amended by replacing **the second sentence starting in line 2** with the following:

The **contractor** shall keep a copy of all drawings, schedules, unpriced **bills of quantities/lump sum document, contract instructions**, minutes of site and other meetings, health and safety files as specified in the scope of work, risk register, claims and variation order register, labour records and subcontractors contracts on the **site** to which the **employer, principal agent** and **agents** shall have access at all times. The **employer** has the right to call for such further information from the **contractor** it deems necessary in the event it carries out any investigation or audit into potential fraud, corruption, fronting, health and safety incidents or verifying information the **contractor** has to supply to the **employer** in terms of this agreement. The Contractor shall ensure a similar right for the Employer with its subcontractors

Clause 3.10 is amended by replacing "**principal agent**" with "**employer**" in the first line.

Fixed: _____ Value related: _____ Time related: _____

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3 **A4 DESIGN RESPONSIBILITY**

Clause 4.0

Fixed: _____ Value related: _____ Time related: _____

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4 **A5 EMPLOYER'S AGENTS**

Clause 5.0

Fixed: _____ Value related: _____ Time
related: _____

Item

5 **A6 SITE REPRESENTATIVE**

Clause 6.0

Fixed: _____ Value related: _____ Time
related: _____

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6 **A7 COMPLIANCE WITH REGULATIONS**

Clause 7.0

Note: The provisions herein include *inter alia*, compliance with all the requirements set out in the Construction Regulations, 2014 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993), and in particular with Regulation 5(1) requiring the compilation of a health and safety plan, as well as Regulation 6(1) requiring the appointment of a construction supervisor

Clause 7.0 is amended by the addition of the following:

7.3 The Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations 2014 will in all respects be applicable to this contract. All obligations in respect of health and safety requirements of the Contractor are set out in the Scope of Work

Contractor's liability as mandatory

7.3.1 Notwithstanding any actions which the **employer** may take, the **contractor** accepts sole liability for due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures imposed by the Occupational Health and Safety Act, 1993 (Act 85 of 1993), and all its regulations, including the Construction Regulations, 2014, for which the **contractor** is liable as mandatory. By entering into this **agreement** it shall be deemed that the parties have agreed in writing to the above provisions in terms of Section 37 (2) of the Act and will enter into the mandatory agreement as set out in the Scope of Work. This clause will be sufficient to establish the mandatory obligations of the **contractor** in the event the parties fail to execute the aforesaid mandatory agreement.”

Fixed: _____ Value related: _____ Time related: _____

Item

7 **A8 WORKS RISK**

Clause 8.0

Fixed: _____ Value related: _____ Time related: _____

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8	A9 INDEMNITIES			
	<p>Clause 9.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
9	A10 WORKS INSURANCES			
	<p>Clause 10.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>			
10	A11 LIABILITY INSURANCES			
	<p>Clause 11.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
11	A12 EFFECTING INSURANCES			
	<p>Clause 12.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
12	A13.0 No clause		N/A	
13	A14 SECURITY			
	<p>Clause 14.0</p> <p>Clauses 14.1 is amended by replacing it with the following:</p> <p>The employer shall have the right to choose the security to be provided in terms of 14.3 or 14.4 as stated in the schedule. The contractor shall provide the security required or chosen by the employer in the schedule substantially in the format prescribed in the tender documents that the contractor submitted a tender offer. The required security shall be provided in the time period prescribed by the employer in the conditional letter of acceptance of the contractor's tender offer.</p> <p>Clauses 14.3 is amended by replacing the last line of</p>			
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sub-clause 14.3.1 “twelve point five (12.5%)” with “ten (10%)”.

Clause 14.4 is amended by replacing the last line of sub-clause 14.4.1 replace “seven point five (7.5%)” with “ten (10%)”.

Clause 14.7 is amended by the addition of the following:

The construction guarantee provided by the contractor shall remain valid for the term of the **agreement** . In case of extensions, the security must also be extended or replaced by another construction guarantee of the same value, with an effective term equal to the term of extension. If the contractor fails to keep a valid security for the duration of the agreement, the principal agent shall deduct an amount of 10% from each interim payment certificate and withhold the amount until the contractor provides a valid construction guarantee. Once the contractor provides the valid construction guarantee, the principal agent will then release the amount held from each payment certificate in the next payment certificate.

Clause 14.7.1 is amended by replacing the second and third line amend “two point five (2.5%)” to read “five (5%)”

Clause 14.0 is amended by the addition of the following:

14.9 A payment reduction of five (5%) of the value of each **payment certificate** up to a maximum of five (5%) of the **contract sum** will be applied until **practical completion**. At **practical completion** the amount withheld will be reduced to two point five (2.5%), which amount will reduce to nil (0%) when the **final account** is issued. The employer reserves the right to use retention money to correct defects where contractor fails to correct, fails or refuses to pay service provides or its subcontractors.

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EXECUTION

14 **A15 PREPARATION FOR AND EXECUTION OF THE WORKS**

Clause 15.0

Clause 15.1.1 is amended by replacing it with “principal agent” with “employer”:

Fixed: _____ Value related: _____ Time related: _____

15 **A16 ACCESS TO THE WORKS**

Clause 16.0

Fixed: _____ Value related: _____ Time related: _____

Item

16 **A17 CONTRACT INSTRUCTIONS**

Clause 17.0

Fixed: _____ Value related: _____ Time related: _____

Item

17 **A18 SETTING OUT OF THE WORKS**

Clause 18.0

Fixed: _____ Value related: _____ Time related: _____

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18 **A19 ASSIGNMENT**

Clause 19.0

Clauses 19 is amended by replacing them with the following:

19.1 The contractor does not cede, delegate or assign any of its rights or obligations to any person.

19.2 Notwithstanding the above, the employer may, on written notice to the contractor, cede and delegate, handover, its rights and obligations under this contract a Related Party or a Client of the employer. On cession Client becomes the employer and takes full responsibility. For the purpose hereof the above clause:

19.2.1 a "Related Party" means any entity that directly or indirectly, through one or more intermediaries, controls or controlled by, or is under common control with the employer and includes any other "Organ of State" as defined in section 239 of the Constitution of the Republic of South Africa, 1996 and any entity or Organ of State for whom the Employer carries out the works or acts as an implementing agent, ("control" means the beneficial ownership of the majority in number of the issued equity any entity (or the whole or majority of the entity's assets), and/or the right or ability to direct or otherwise control the entity or the votes attaching to the majority of the entity's equity and "controlled" or "under common control" shall have a similar meaning); and

Client means the owner, funder and or sponsor of the project and or programme managed in terms of the MOA between the Client and DBSA.

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19	<p>A20 NOMINATED SUB-CONTRACTORS</p> <p>Clause 20.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
20	<p>A21 SELECTED SUBCONTRACTORS</p> <p>Clause 21.0</p> <p>Clause 21 is amended by replacing sub-clause 21.1.2 to 21.1.4 and 21.2 to 21.6 with the following:</p> <p>The contractor and principal agent shall appoint a selected subcontractor in accordance with the provisions of the Scope of Work</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
21	<p>A22 EMPLOYER'S DIRECT CONTRACTORS</p> <p>Clause 22.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
22	<p>A23 CONTRACTOR'S DOMESTIC SUBCONTRACTORS</p> <p>Clause 23.0</p> <p>Clause 23 is amended by adding sub-clause 23.3 - 23.6:</p> <p>23.3 The contractor may not subcontract the whole of the work without the written instruction or approval of the employer. In such event the employer may require the contractor to cede the contract to the subcontractor.</p> <p>23.4 The subcontractors appointed by the contractor to comply with the developmental and transformation requirements from the employer in terms of applicable legislation, including but not limited to the Preferential Procurement Policy Framework Act, 5 of 2000, and regulation thereto, will be domestic subcontractors for</p>			
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purposes of this **agreement**, and sub-clauses 23.1 and 23.2 will apply accordingly.

23.5 The contractor shall submit the agreement for each subcontract to the Principal Agent and employer may redact all commercially sensitive information.

23.6 Contractors' failure to pay Subcontractors
If the contractor fails to make payment of any amount due and payable to a subcontractor ("the Subcontractor debt") and the Principal Agent considers that the subcontractor debt has an adverse impact(s) on the progress of the works or the obligations of the contractor under the agreement, the Principal Agent may request evidence of payment to the subcontractor. In the absence of such evidence, the employer may (at its own discretion) pay the subcontractor debt directly to the subcontractor concerned. Such payment is, for all purposes under the agreement, regarded as a payment made on behalf of the contractor and at the request of and with the approval and consent of the contractor, as a payment towards the contract sum. As such, payment to the contractor shall be less the payment to the subcontractor.
All adverse effects as a result of or arising from the subcontractor debt does not entitle the contractor to any cost or time.

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COMPLETION				
23	A24 PRACTICAL COMPLETION Clause 24.0 Fixed: _____ Value related: _____ Time related: _____	Item		
24	A25 WORK'S COMPLETION Clause 25.0 Fixed: _____ Value related: _____ Time related: _____	Item		
25	A26 FINAL COMPLETION Clause 26.0 Fixed: _____ Value related: _____ Time related: _____	Item		
26	A27 LATENT DEFECTS LIABILITY PERIOD Clause 27.0 Fixed: _____ Value related: _____ Time related: _____	Item		
27	A28 SECTIONAL COMPLETION Clause 28.0 Fixed: _____ Value related: _____ Time related: _____	Item		
28	A29 REVISION OF DATE FOR PRACTICAL COMPLETION Clause 29.0 Fixed: _____ Value related: _____ Time related: _____	Item		
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29	<p>A30 PENALTY FOR NON-COMPLETION</p> <p>Clause 30.0</p> <p>Clause 30.1 is amended replacing reference to “36.3” at end of sentence with “36.0”</p> <p>Where the contractor fails to bring the works or sections thereof to practical completion on the date or dates stated in the schedule or revision thereof in terms of 29.0, the contractor shall be liable to the employer for the penalty per calender day for non completion of the works or each section thereof at the rate stated in the schedule. The principal agent shall calculate the penalty due from the date or revised date in terms of 29.0 up to and including the actual date of practical completion of the works or section thereof or cancellation in terms of 36.0.</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p><u>PAYMENT</u></p>	Item		
30	<p>A31 INTERIM PAYMENT TO THE CONTRACTOR</p> <p>Clause 31.0</p> <p>Clause 31.9 is amended by substitution of the words "seven (7) calendar days" in the first line by the words "thirty (30) calendar days"</p> <p>Clause 31.12 is amended by removing the words subject to the employer giving the contractor a tax invoice for the amount due</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>			
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31	A32 ADJUSTMENT TO THE CONTRACT VALUE Clause 32.0 Fixed: _____ Value related: _____ Time related: _____	Item		
32	A33 RECOVERY OF EXPENSE AND LOSS Clause 33.0 Fixed: _____ Value related: _____ Time related: _____	Item		
33	A34 FINAL ACCOUNT AND FINAL PAYMENT Clause 34.0 Clause 34.13 is amended by removing subject to the employer giving the contractor a tax invoice for the amount due. Fixed: _____ Value related: _____ Time related: _____	Item		
34	A35 PAYMENT TO OTHER PARTIES Clause 35.0 Fixed: _____ Value related: _____ Time related: _____	Item		
	<u>CANCELLATION</u> A36 CANCELLATION BY EMPLOYER - CONTRACTOR'S DEFAULT Clause 36.0 Fixed: _____ Value related: _____ Time related: _____			
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35	<p>A37 CANCELLATION BY EMPLOYER – LOSS AND DAMAGE</p> <p>Clause 37.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
36	<p>A38 CANCELLATION BY CONTRACTOR - EMPLOYER'S DEFAULT</p> <p>Clause 38.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>			
37	<p>A39 CANCELLATION - CESSATION OF THE WORKS</p> <p>Clause 39.0</p> <p>Clause 39.2 is amended by replacing the third sentence with the following:</p> <p>The employer shall pay the contractor all amounts due in terms of the contract for work completed at the date of termination or cancellation in terms of this clause 39.2, including retention money after deducting any amounts due to the employer. The employer will also return any guarantees still valid to the contractor after such cancellation.</p> <p>Clause 39.2.1 and 39.2.3 are amended by replacing with the following:</p> <p>No Clause</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>			
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38	<p>A40 DISPUTE SETTLEMENT</p> <p>Clause 40.0</p> <p>Clause 40 is amended by retaining clause 40 in respect of dispute settlement to be retained in its original form not applying the state clause amendments.</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p><u>SUBSTITUTE PROVISIONS</u></p>	Item		
39	<p>A41 STATE CLAUSES</p> <p>Clause 41.0</p> <p>Clause 41.1.3 is amended by replacing the definition for CONSTRUCTION PERIOD with the following:</p> <p>CONSTRUCTION PERIOD means a duration of 18 months commencing from the period the contractor takes possession of the sites to the date the certificate of practical completion is issued.</p> <p>Clause 41.1 is amended by the addition of the following:</p> <p>Notwithstanding any clause to the contrary, on cancellation of this agreement either by the employer or the contractor, or for any reason whatsoever, the contractor shall on written instruction, discontinue with the works on a stated date and withdraw himself from the site. The contractor shall not be entitled to refuse to withdraw from the works on the grounds of any lien or right of retention or on the grounds of any other right whatsoever.</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
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	<p><u>CONTRACT VARIABLES</u></p>			
40	<p>A42 PRE-TENDER INFORMATION</p> <p>Clause 42.0</p> <p>Tenderers are referred to the document C1.2 Contract Data for variables pertaining to this contract</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
	<p><u>THE SCHEDULE</u></p>			
	<p><u>SECTION B: JBCC PRELIMINARIES</u></p>			
	<p><u>B1.0 DEFINITIONS AND INTERPRETATION</u></p>			
41	<p><i>B1.1 Definitions and interpretation</i></p> <p>See also clause A1.0 of Section A for additional and/or amended definitions which shall apply equally to this Section</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
	<p><u>B2.0 DOCUMENTS</u></p>			
42	<p><i>B2.1 Checking of documents</i></p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
43	<p><i>B2.2 Provisional bills of quantities</i></p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
44	<p><i>B2.3 Availability of construction documentation</i></p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
45	<p><i>B2.4 Interests of agents</i></p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
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46	<p>B2.5 Priced documents</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
47	<p>B2.6 Tender submission</p> <p>Clause 2.6 is amended by replacing “JBCC Form of Tender” with “Form of Offer and Acceptance (C1.1)”.</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
	<u>B3.0 THE SITE</u>			
48	<p>B3.1 Defined works area</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
49	<p>B3.2 Geotechnical investigation</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
50	<p>B3.3 Inspection of the site</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
51	<p>B3.4 Existing premises occupied</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
52	<p>B3.5 Previous work - dimensional accuracy</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
53	<p>B3.6 Previous work - defects</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
54	<p>B3.7 Services - known</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
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55	B3.8 Services - unknown Fixed: _____ Value related: _____ Time related: _____	Item		
56	B3.9 Protection of trees Fixed: _____ Value related: _____ Time related: _____	Item		
57	B3.10 Articles of value Fixed: _____ Value related: _____ Time related: _____	Item		
58	B3.11 Inspection of adjoining properties Fixed: _____ Value related: _____ Time related: _____	Item		
<u>B4.0 MANAGEMENT OF CONTRACT</u>				
59	B4.1 Management of the works Fixed: _____ Value related: _____ Time related: _____	Item		
60	B4.2 Programme for the works Fixed: _____ Value related: _____ Time related: _____	Item		
61	B4.3 Progress meetings Fixed: _____ Value related: _____ Time related: _____	Item		
62	B4.4 Technical meetings Fixed: _____ Value related: _____ Time related: _____	Item		
63	B4.5 Labour and plant records Fixed: _____ Value related: _____ Time related: _____	Item		
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<u>B5.0 SAMPLES, SHOP DRAWINGS AND MANUFACTURERS' INSTRUCTIONS</u>				
64	<i>B5.1 Samples of materials</i> Fixed: _____ Value related: _____ Time related: _____	Item		
65	<i>B5.2 Workmanship samples</i> Fixed: _____ Value related: _____ Time related: _____	Item		
66	<i>B5.3 Shop drawings</i> Fixed: _____ Value related: _____ Time related: _____	Item		
67	<i>B5.4 Compliance with manufacturers instruction</i> Fixed: _____ Value related: _____ Time related: _____	Item		
<u>B6.0 TEMPORARY WORKS AND PLANT</u>				
68	<i>B6.1 Deposits and fees</i> Fixed: _____ Value related: _____ Time related: _____	Item		
69	<i>B6.2 Enclosure of the works</i> Fixed: _____ Value related: _____ Time related: _____	Item		
70	<i>B6.3 Advertising</i> Fixed: _____ Value related: _____ Time related: _____	Item		
71	<i>B6.4 Plant, equipment, sheds and offices</i> Fixed: _____ Value related: _____ Time related: _____	Item		
72	<i>B6.5 Main notice board</i> Fixed: _____ Value related: _____ Time related: _____	Item		
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73	B6.6 Subcontractors' notice board	Item	R
	Fixed: _____ Value related: _____ Time related: _____		
	<u>B7.0 TEMPORARY SERVICES</u>		
74	B7.1 Location	Item	
	Fixed: _____ Value related: _____ Time related: _____		
75	B7.2 Water	Item	
	Fixed: _____ Value related: _____ Time related: _____		
76	B7.3 Electricity	Item	
	Fixed: _____ Value related: _____ Time related: _____		
77	B7.4 Telecommunication facilities	Item	
	Fixed: _____ Value related: _____ Time related: _____		
78	B7.5 Ablution facilities	Item	
	Fixed: _____ Value related: _____ Time related: _____		
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	<u>B8.0 PRIME COST AMOUNTS</u>			
79	<i>B8.1 Responsibility for prime cost amounts</i> Fixed: _____ Value related: _____ Time related: _____	Item		
	<u>9.0 ATTENDANCE ON N/S SUBCONTRACTORS</u>			
80	<i>B9.1 General attendance</i> Fixed: _____ Value related: _____ Time related: _____	Item		
81	<i>B9.2 Special attendance</i> Fixed: _____ Value related: _____ Time related: _____	Item		
82	<i>B9.3 Commissioning - fuel, water and electricity</i> Fixed: _____ Value related: _____ Time related: _____	Item		
	<u>B10. FINANCIAL ASPECTS</u>			
83	<i>B10.1 Statutory taxes, duties and levies</i> Fixed: _____ Value related: _____ Time related: _____	Item		
84	<i>B10.2 Payment for preliminaries</i> Fixed: _____ Value related: _____ Time related: _____	Item		
85	<i>B10.3 Adjustment of preliminaries</i> Fixed: _____ Value related: _____ Time related: _____	Item		
86	<i>B10.4 Payment certificate cash flow</i> Fixed: _____ Value related: _____ Time related: _____	Item		
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B11. GENERAL				
87	B11.1 Protection of the works Fixed: _____ Value related: _____ Time related: _____	Item		
88	B11.2 Protection / isolation of existing / sectionally occupied works Fixed: _____ Value related: _____ Time related: _____	Item		
89	B11.3 Security of the works Fixed: _____ Value related: _____ Time related: _____	Item		
90	B11.4 Notice before covering work Fixed: _____ Value related: _____ Time related: _____	Item		
91	B11.5 Disturbance Fixed: _____ Value related: _____ Time related: _____	Item		
92	B11.6 Environmental disturbance Fixed: _____ Value related: _____ Time related: _____	Item		
93	B11.7 Works cleaning and clearing Fixed: _____ Value related: _____ Time related: _____	Item		
94	B11.8 Vermin Fixed: _____ Value related: _____ Time related: _____	Item		
95	B11.9 Overhand work Fixed: _____ Value related: _____ Time related: _____	Item		
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96 **B11.10 Instruction manuals and guarantees**
Fixed: _____ Value related: _____ Time
related: _____

Item

97 **B11.11 As built information**
Fixed: _____ Value related: _____ Time
related: _____

Item

98 **B11.12 Tenant installations**
Fixed: _____ Value related: _____ Time
related: _____

Item

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B12. SCHEDULE OF VARIABLES

B12.1 Pre-tender information

Fixed: _____ Value related: _____ Time related: _____

This schedule contains all variables referred to in this document and is divided into pretender and post-tender categories. The pre-tender category must be completed in full and included in the tender documents. Both the pre-tender and post-tender categories form part of these Preliminaries.

Spaces requiring information must be filled in, shown as "not applicable" or deleted and not left blank. Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided the information should be annexed hereto and cross-referenced to the applicable clause of the schedule. Key cross reference clauses are italicized in [] brackets

12.1 PRE TENDER INFORMATION

12.1.1 Provisional Bills of Quantities

[2.2] The quantities are provisional: *YES*

12.1.2 Availability of construction documentation

[2.3] *Construction of documentation is complete: NO*

12.1.3 Interest of agents

[2.4] Details: See Contract Data Part C/1 of Tender

12.1.4 Defined works area

[3.1] Details: As per Tender Data

12.1.5 Geotechnical investigation

[3.2] Details: NONE

12.1.6 Existing premises occupied

[3.4] Specific requirements: N/A

12.1.7 Previous work - dimensional accuracy

[3.5] Details: To be checked on site by contractor prior to building operations.

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12.1.8 **Previous work - defects**
[3.6] Details: To be checked on site by contractor prior to building operations.

12.1.9 **Services - known**
[3.7] Details: Should the contractor encounter any existing services such as underground cables, pipes or sewer during the execution of the works he shall notify the principal agent immediately and suspend all affected work in the immediate vicinity until instruction to proceed has been given by the principal agent.

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12.1.10 Protection of trees

[3.9] Specific requirements: All trees on the site outside of the position of the proposed structure must be protected.

12.1.11 Inspection of adjoining properties

[3.11] Specific requirements: The contractor must inspect adjoining properties and immediately bring to the notice of the Principal Agent of any consequences that may arise from the building works.

12.1.12 Enclosure of the works

[6.2] Specific requirements: The contractor shall enclose the works as required by the Occupational Health and Safety Act.

12.1.13 Offices

[6.4.3] Specific requirements: The contractor shall provide, maintain and remove on completion of the works an office for the exclusive use of the principal agent, minimum size 4 x 3 x 3m high internally, suitably insulated and ventilated, provided with electric lighting and fitted with boarded floor, desk, chairs, drawing stool, drawing board and lock-up drawers for drawings. The office shall be kept clean and fit for use at all times.

12.1.14 Main notice board

[6.5] Specific requirements:

The contractor shall provide, erect where directed, maintain and remove on completion of the works an DRPW compliant notice board as detailed by the Principal Agent.

The board shall be securely fixed to hoarding where hoarding is provided, or fixed to and including a suitable supporting structure of timber or tubular posts and braces.

Sub-contractor's individual boards will be allowed on the site subject to the written approval of the Representative/Agent.

12.1.15 Subcontractors' notice board

[6.6] Specific requirements: NO

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12.1.16 **Water**
 [7.2] Option A (by contractor)
 (YES)

Option B (by employer - free of charge when available) (NO)

Option C (by employer - metered) (NO)

12.1.17 **Electricity**
 [7.3] Option A (by contractor)
 (YES)

Option B (by employer - free of charge when available) (NO)

Option C (by employer - metered) (NO)

12.1.18 **Telecommunications**
 [7.4] Telephone (YES)

Facsimile (NO)

E-mail (YES)

12.1.19 **Abution facilities**
 [7.5] Option A (by contractor)
 (YES)

Option B (by employer) (NO)

12.1.20 **Protection of existing/sectionally occupied works**
 [11.2] Protection is required (Only when existing buildings) (YES)

12.1.21 **Special attendance**
 [9.2] **Electrical sub-contractor** (1) details: Site Meetings

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12.1.22 **Protection of works**

[11.1] Specific requirements:

The contractor shall protect the works for the duration of the contract.

12.1.23 **Disturbance**

[11.5] Specific requirements:

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

12.1.24 **Environmental disturbance**

[11.6] Specific requirements: None

12.2 POST-TENDER INFORMATION

12.2.1 **Payment of preliminaries**

[10.2] Option A (prorated)
(YES)

Option B (calculates)
(NO)

12.2.2 **Adjustment of preliminaries**

[10.3] Option A (three categories)
(YES)

Option B (detailed breakdown)
(NO)

12.2.3 **Additional agreed preliminaries items**

Details: **N/A**

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SCHEDULE OF SUPPLEMENTARY INFORMATION

NOTE:

The information listed below is in respect of certain clauses in the Preliminaries, requiring the supplementary information

Amount of insurance against injury to person or property in respect of any single occurrence **R**

Amount of insurance against removal of support to adjoining properties in respect of any single occurrence **Not specifically prescribed**

Contract period - **24 (Twenty four) months**

The date for site handover :- TBA

Amount of penalty per day on which the completion of the works may be in arrears:

R1.25 per R100 of contract value per day (Excluding VAT)

Specification of Materials and Methods to be used - **PW 371, Edition 2.1 July 2014**

Edition of Standard System of measuring building work: Seventh Edition including the latest amendments

Section C contains specific preliminary items which apply to this contract except where N/A (Not Applicable) appears against an item

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SECTION C: SPECIFIC PRELIMINARIES

100 **C1 CONTRACT DRAWINGS**

The drawings issued with the tender documents do not comprise the complete set but serve as a guide only for tendering purposes and for indicating the scope of the work to enable the tenderer to acquaint himself with the nature and extent of the **works** and the manner in which they are to be executed

Should any part of the drawings not be clearly intelligible to the tenderer he shall, before submitting his tender, obtain clarification in writing from the **principal agent**

Fixed: _____ Value related: _____
Time related: _____

Item

101 **C2 GENERAL PREAMBLES**

The document "Specification of Materials and Methods to be used (PW371)" is obtainable on request from the head office and all regional offices of the Department, and shall be read in conjunction with the **bills of quantities** and be referred to for the full descriptions of work to be done and materials to be used

Fixed: _____ Value related: _____
Time related: _____

Item

102 **C3 TRADE NAMES**

Wherever a trade name for any product has been described in the **bills of quantities**, the tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the **principal agent** being obtained prior to the closing date for submission of tenders

If prior written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for

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Time related: _____

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103	<p>C4 IMPORTED MATERIALS AND EQUIPMENT</p> <p>Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations. (refer to Schedule of Imported Materials and Equipment (DPW23EC) to be completed by tenderer)</p> <p>Notwithstanding any provisions elsewhere regarding the adjustment of contract prices, the price of any item, material or equipment listed in terms of this clause shall be excluded from the Contract Price Adjustment Provisions (if applicable)</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
104	<p>C5 VIEWING THE SITE IN SECURITY AREAS</p> <p>The site is situated in a security area and the tenderer must arrange with the unit commander or other responsible officer to obtain permission to enter the site for tendering purposes</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>		Item	
105	<p>C6 COMMENCEMENT OF WORKS IN SECURITY AREAS</p> <p>As the works falls within a security area the contractor must give the unit commander or other responsible officer notice before commencement of the works. Should the contractor fail to make such arrangements, admission to the site may be refused and any additional costs will be for the contractor's account</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>		Item	
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106	<p>C7 ENTRANCE PERMITS TO SECURITY AREAS</p> <p>As the works falls within a security area the contractor shall obtain entrance permits for his personnel and workmen entering the area and shall comply with all regulations and instructions which may be issued from time to time regarding the protection of persons and property under the control of the Defence Force, Police or chief security officer</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
107	<p>C8 SECURITY CHECK OF PERSONNEL</p> <p>The principal agent may require the contractor to have his personnel and workmen, or a certain number of them, security classified</p> <p>In the event of the principal agent requesting the removal of a person or persons from the works for security reasons, the contractor shall do so forthwith and shall thereafter ensure that such person or persons are denied access to the works and the site and/or to any document or information relating to the works</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
108	<p>C9 PROHIBITION ON TAKING OF PHOTOGRAPHS</p> <p>In terms of article 119 of the defence Act, 44 of 1957, it is prohibited to sketch or to take photographs of any military site or installation or any building or civil works thereon or to be in possession of a camera or other apparatus used for taking of photographs except when authorized thereto by or on behalf of the Minister</p> <p>The same prohibition is also applicable to all correctional institutions in terms of article 44.1(e) of the Correctional Services Act 8 of 1959</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
<p>Carried to Collection</p>			<p>R</p>	
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C10 HIV/AIDS AWARENESS

It is required of the **contractor** to thoroughly study the HIV/AIDS Specification (PW 1544) of the Department that must be read together with and is deemed to be incorporated under this Section of the **Bills of Quantities**. Provision for pricing of HIV/AIDS awareness is made under items C10.1 to C10.5 hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained. Also see Part C3.6 Social and Economic Deliverables F1

The **contractor** must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the **principal agent**, notwithstanding the provisions of Clause A 31 of "Section 1: Preliminaries (Section A)" or any other clause to the contrary, reserves the right to delay issuing any progress **payment certificate** until the **contractor** provides satisfactory proof of compliance. The **contractor** shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment.

109 **C10.1 AWARENESS CHAMPION**

Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification

Fixed: _____ Value related: _____
Time related: _____

Item

110 **C10.2 AWARENESS WORKSHOPS**

Selection and appointment of a competent Service Provider approved by the **principal agent**, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-media techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification

Fixed: _____ Value related: _____
Time related: _____

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111	<p>C10.3 POSTERS, BOOKLETS, VIDEOS, ETC.</p> <p>Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period, all in accordance with the HIV/AIDS Specification</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
112	<p>C10.4 ACCESS TO CONDOMS</p> <p>Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period, all in accordance with the HIV/AIDS Specification</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
113	<p>C10.5 MONITORING</p> <p>Monitoring HIV/AIDS awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
<p>Carried to Collection</p>			<p>R</p>	
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114 **C11 OCCUPATIONAL HEALTH AND SAFETY ACT**

The contractor shall comply with the requirements set out in the Construction Regulations, 2014 issued under the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

It is required of the contractor to thoroughly study the Health and Safety Specification that must be read together with and is deemed to be incorporated under this Section of the bills of quantities/lump sum document.

The contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of clause A3.10 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment.

Provision for pricing of the Occupational Health and Safety Act, Construction Regulations, Health and Safety Specification and Project Specific Plan is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained.

Note:

The pricing of this Clause shall include but not limited to items in "Annexure B - Health & Safety Bill of Quantities" within Book 2 of the Tender Document.

Fixed: _____ Value related: _____
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115	<p>C11.1 COVID-19 SPECIFIC REQUIREMENTS</p> <p>All legislative requirements relating to Covid-19 is to be priced under this clause - refer to the attached Health and Safety COVID related Specifications.</p> <p>Based on a 24 months Covid-19 restriction period (Provisional)</p> <p>Note: This clause will be excluded from the Fixed, Value and Time-related adjustments.</p>	Item		
116	<p>C12. SOCIAL AND ECONOMIC DELIVERABLES IN CONSTRUCTION WORKS CONTRACTS</p> <p>The contractor shall thoroughly study and comply with the requirements and specification data set out in the CIDB B.U.I.L.D Programme for Standard for Indirect Targeting for Enterprise Development through construction works and Standard for Skills Development though infrastructure projects.</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
117	<p>C13 LOCAL BUILDING MATERIALS</p> <p>Preference shall be given to the supply of materials produced or manufactured in the Gauteng Province provided that:</p> <p>(a) Such materials comply in all respects with the specific requirements of the "Model Preambles For Trades".</p> <p>(b) The availability of such materials shall not adversely affect the desired progress of the specific works.</p> <p>(c) The use of such materials shall not constitute grounds for any claim for increased cost in respect thereof.</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
<p>Carried to Collection</p>				R
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C14 LOCAL EMPLOYMENT GENERATION

It is an explicit condition of this tender that the Contractors labour force must comprise of persons normally resident in the locality of the works (local labour) and hence must be employed on this contract.

The contractor will not be allowed to import skilled personnel if the required skills exist within the local community. The contractor will however be allowed to make use of his own permanently employed machine operators and drivers.

Provided, however, that should adequate and appropriate labour not be available within the locality, other labour may be employed subject to satisfactory proof that every reasonable endeavour has been made to employ labour from the immediate locality. The contractor shall identify the local community leaders with the purpose of negotiating with them regarding the utilisation of local labour in the construction process.

The specific employment goals, which are to be met for this project, are as follows:

(a) A minimum of 70% local labour employment

Target Area 1: Ekurhuleni Metropolitan Municipality
Target Area 2: Ekurhuleni South District

(b) The Contractor, inclusive of subcontractors and service providers, is allowed to deploy a maximum of 30% seconded (local & non-local labour) on the Project.

Fixed: _____ Value related: _____
Time related: _____

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	<p>C15.1 SMME SPECIFICATIONS</p> <p>The Tenderer is encouraged to target works that can be performed by local enterprises as prime contractors, sub-contractors or suppliers. This target must be based on the value of work to be performed. The Local Enterprise Participation goal must be calculated in relation to every entity involved in the project.</p> <p>Management staff from other areas for the duration of the project will not qualify as local. Plant and equipment brought from other areas will not qualify as local.</p> <p>Material and plant sourced from local suppliers or agencies will qualify as local. A supplier that has been established locally by a Tenderer solely for the purpose of servicing the project will not qualify.</p> <p>The contractor shall ensure full achievement of the deliverables through the construction period of this construction contract.</p>			
119	<p>C15.2 SMME CONSTRUCTION MENTOR</p> <p>Provision for pricing for the employment, on a full-time basis for the duration of the contract, a SMME Construction Mentor. All costs associated with the execution of the SMME Construction Mentor duties, provision of office facilities and tools of trade are deemed to be priced hereunder. No additional claims in this regard shall be entertained. The above is in strict accordance with Section D 11.1 of the Specification for the Employment of SMME Sub Contractors (SES 006) and all costs should be included in this item.</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
120	<p>WAIVER OF LIEN</p> <p>The tenderers are notified that he/she shall sign "Waiver of Lien" together with the JBCC Principal Building Agreement Edition 4.1 Code 2101 March 2005.</p>	Item		
	<p style="text-align: center;">Carried to Collection</p> <p>Section No. 1 PRELIMINARIES Bill No. 1 PRELIMINARIES</p>		R	

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Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 1</u></p> <p><u>EARTHWORKS (PROVISIONAL)</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary products in descriptions:</u></p> <p>Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.</p> <p><u>Nature of material to be excavated:</u></p> <p>The material to be excavated is assumed to be predominantly of a composition that will allow excavation in "earth" as specified, but including a percentage of excavation in "soft rock" and "hard rock".</p> <p>A soils investigation has been carried out on site by the Engineer and the report is available from them. Descriptions of excavations shall be deemed to include all ground conditions classifiable as earth described in the above report and where conditions of a more difficult character are indicated these are separately measured.</p> <p><u>Carting away of excavated material:</u></p> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations, or alternatively, from stock piles situated on the building site.</p>			
	Carried to Collection			
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Dewatering of excavations:

The Contractor shall allow for removing seepage and other water from subterranean sources from the excavations by pumping, baling or otherwise. Accurate records of all such dewatering shall be kept to determine the total volume of water so removed and a clear distinction shall be made between water from subterranean sources and other water.

Density testing on filling:

Rates for filling, etc. shall include for all density and soil type testing to prove that the specified compaction is achieved. When additional testing is done on instruction of the Principal Agent and these tests are successful, they will be paid for additionally.

Imported fill:

"Filling and bedding to trenches etc. to be in compliance with SABS 1200 DB and LB respectively"

EXCAVATION, FILLING, ETC. OTHER THAN BULK

Excavation in earth not exceeding 2m deep:

1	Trenches and holes.	m3	3 455	
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Extra over trench and hole excavations in earth for excavation in:

2	Soft rock.	m3	199	
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3	Hard rock.	m3	103	
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Extra over all excavations for carting away:

4	Surplus material from excavations, stock piles e.t.c to a dumping site to be located by the Contractor.	m3	2 056	
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Risk of collapse of excavations:

5	Sides of trenches and holes excavation not exceeding 1500mm deep.	m2	9 118	
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6	Keeping excavations free of all water other than subterranean water.	m3	1 399	Item
<u>EARTH FILLING, ETC.</u>				
<u>Earth filling obtained from the excavations and / or prescribed stock piles on site compacted to 95% Mod. AASHTO density:</u>				
7	Backfilling to trenches, holes, etc.	m3	1 399	
<u>Earth Filling Selected And Supplied By The Contractor, Deposited In Layers Not Exceeding 150mm Thick, Watered And Consolidated In:</u>				
8	G5 material to 93% modified AASHTO density under footings, etc.	m3	371	
9	G7 material to 90% modified AASHTO density under footings, etc.	m3	601	
<u>Sand filling supplied by the contractor:</u>				
10	Under surface beds.	m3	579	
11	Under aprons, V-channels, e.t.c.	m3	65	
<u>Compaction of surfaces:</u>				
12	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 93% Mod AASHTO density.	m2	11 580	
<u>Prescribed Density Tests As Check On Contractors Tests Included In Filling Above:</u>				
13	Modified AASHTO density test and deliver the results to the Principal Agent within 24 hours of the tests being completed.	No	48	
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SOIL POISONING

SABS Approved brand of anti-termite soil poison in accordance with SANS 5859, with 50mm sand over poison applied by a Registered Pest Control Company and guaranteed against termite infestation for ten years:

14	Under floors etc.	m2	11 580
15	To bottoms and sides of trenches etc	m2	11 377

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EARTHWORKS (PROVISIONAL)

Section No. 2

BUILDING WORKS

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EARTHWORKS (PROVISIONAL)

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 2</u></p> <p><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary products in descriptions:</u></p> <p>Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.</p> <p><u>Cost of tests:</u></p> <p>The costs of making, storing and testing of concrete test cubes as required under clause 7 'Tests' of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Architect. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Architect. (Test cubes are measured separately).</p> <p><u>Formwork:</u></p> <p>Descriptions of formwork shall be deemed to include use and waste only (except where described as left in or permanent), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use.</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 2 BUILDING WORKS Bill No. 2 CONCRETE, FORMWORK & REINFORCEMENT</p>			<p style="text-align: right;">R</p>

The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself.

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

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

PRECAST CONCRETE

1	220mm Diameter precast concrete bollards installed to manufacturer's detail at max 1.5m centers. Finish to Architect's specification.	No	9
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REINFORCED CONCRETE

25 Mpa/13mm. concrete:

2	Infill to cavity walls	m3	254
3	Infill to brick columns.	m3	4

REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES

25 MPa/19mm. Concrete:

4	Bases.	m3	6
5	Strip footings.	m3	595
6	Surface beds on waterproofing.	m3	1 158
7	Aprons / V-Channels.	m3	130

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<u>REINFORCED CONCRETE CAST ON FORMWORK</u>			
<u>25MPa/20mm concrete:</u>			
8	Slabs, including beams and inverted beams.	m3	664
9	Stairs including landings, beams and inverted beams.	m3	17
<u>30 MPa/19mm. Concrete:</u>			
10	Columns in foundations.	m3	4
11	Columns	m3	6
<u>TEST BLOCKS.</u>			
<u>Test blocks:</u>			
12	Making and testing set of three 150mm x 150mm x 150mm concrete strength test cubes (Provisional).	Sets	85.0
<u>CONCRETE SUNDRIES</u>			
<u>Finishing top surfaces of concrete smooth with a wood float:</u>			
13	Apron / V-Channels.	m2	1 296
14	Surface beds, slabs, etc.	m2	13 971
<u>40mm Thick Non-combustible lightweight insulation board fitted on underside of concrete surfaces to satisfy manufacturers requirements</u>			
15	Surface beds on waterproofing	m2	11 580
<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u>			
<u>Rough formwork to sides:</u>			
16	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	1 977
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<u>Rough Formwork to Sides and Soffits:</u>			
17	Soffits of slabs propped up exceeding 1500mm but not exceeding 3500mm high.	m2	4 096
18	Beams propped up exceeding 1500mm and not exceeding 3500mm high.	m2	122
19	Beams propped up exceeding 5000mm and not exceeding 6500mm high.	m2	232
20	Landings.	m2	27
21	Stairs with sloping soffits.	m2	35
<u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u>			
<u>Smooth formwork to sides:</u>			
22	Steps	m2	14
23	Rectangular columns in foundations	m2	2
24	Rectangular columns	m2	5
25	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	74
<u>MOVEMENT JOINTS ETC.</u>			
<u>Isolation joint with closed cell foam or compressible softboard between vertical concrete and brick surfaces sealed with 10mm x 10mm Sikaflex-pro 2HP or similar approved:</u>			
26	10mm Joint not exceeding 300mm high.	m	1 850
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	<u>Expansion joints with closed cell foam or compressible softboard between vertical concrete surfaces filled with 10mm x 10mm Sikaflex-pro 2HP or similar approved:</u>				
27	10mm Joint not exceeding 300mm high.	m	1 453		
	<u>Saw cut joints ream out to 6 x 20mm and sealed with 15 x 6 sikaflex-pro 2HP sealant on polychord backing strip:</u>				
28	3.5 x 30mm Saw cut joints on top of concrete.	m	541		
	<u>REINFORCEMENT (PROVISIONAL)</u>				
	<u>Fabric reinforcement:</u>				
29	Type 193 fabric reinforcement in concrete apron channels, etc.	m2	1 296		
30	Type 193 fabric reinforcement in surface beds, slabs etc.	m2	13 971		
	<u>Mild steel reinforcement to structural concrete work</u>				
31	10mm. diameter bar	t	1.80		
	<u>High tensile steel reinforcement to structural concrete work:</u>				
32	10mm. diameter bar	t	15.64		
33	12mm. diameter bar	t	61.21		
34	16mm. diameter bar	t	7.62		
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Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 3</u></p> <p><u>MASONRY</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary products in descriptions:</u></p> <p>Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.</p> <p><u>Sizes in descriptions:</u></p> <p>Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick.</p> <p><u>Face bricks:</u></p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour.</p> <p><u>Pointing:</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.</p> <p><u>Samples, etc:</u></p> <p>Rates for brickwork, faced brickwork, etc shall include for all required samples.</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 2 BUILDING WORKS Bill No. 3 MASONRY</p>			<p style="text-align: right;">R</p>

BRICKWORK IN FOUNDATIONS

Brickwork of NFP bricks (14 MPa nominal compressive strength) in Class I mortar:

1	Brick columns.	m3	31
2	One brick walls.	m2	338
3	330mm Hollow walls of two half brick skins including wire ties, filled with concrete (concrete elsewhere measured).	m2	2 307

Allow The Prime Cost of R8800.00 Per Thousand Face Bricks Delivered to site in stretcher bond pointed with 6mm square deep recessed horizontal and vertical joints including labour, profit, wastage etc:

4	Extra over ordinary brickwork for face brickwork.	m2	354
5	Extra over brickwork for internal face brickwork.	m2	1 464
6	Extra over brickwork for facing 340mm x 340mm piers.	m2	34

BRICKWORK SUNDRIES

Brickwork reinforcement:

7	75mm Wide reinforcement built in horizontally.	m	3 178
8	230mm Wide reinforcement built in horizontally.	m	10 499

BRICKWORK IN SUPERSTRUCTURE

Brickwork of NFP bricks (14 MPa nominal compressive strength) in Class I mortar:

9	Half brick walls.	m2	666
10	Ditto, but in beamfilling.	m2	84
11	One brick walls.	m2	3 765
12	Ditto, but in gable walls	m2	227

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13	Ditto, but in firewall.	m2	557		
14	270mm Cavity walls including 32mm x 1.2mm thick 'eCo' wall ties built into brickwork	m2	7 538		
15	Ditto, but in gable walls.	m2	235		
16	Brick columns.	m3	34		
<u>BRICKWORK SUNDRIES</u>					
17	Bag down outer face of inner skin of brick wall with 4:1 cement slurry and apply two coats bituminous emulsion including working around ties.	m2	8 321		
<u>Approved polysulphide sealing compound including backing cord, bond breaker, primer etc.:</u>					
18	10mm x 12mm In expansion joints in walls including raking out expansion joint filler as necessary	m	601		
<u>Joint forming material in movement joints:</u>					
19	10mm Cell foam or compressible softboard built in vertically or horizontally between brick skins, concrete, etc.	m2	402		
<u>Brickwork reinforcement:</u>					
20	75mm Wide reinforcement built in horizontally.	m	2 402		
21	150mm Wide reinforcement built in horizontally.	m	27 323		
<u>Prestressed fabricated precast lintels including necessary temporary supports:</u>					
22	110mm x 75mm Lintels in lengths not exceeding 3000mm.	m	1 276		
23	110mm x 75mm. lintels in lengths exceeding 3000mm and not exceeding 4500mm	m	17		
<u>Galvanised wire ties etc.</u>					
24	32mm x 1.2mm thick hoop iron strap 1600mm length with one end fixed to truss and other end built into brickwork.	No	890		
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35mm x 1.2mm thick hoop iron strap 700mm Length
fixed to column and brickwork.

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MASONRY

FACE BRICKWORK

**Allow The Prime Cost of R8800.00 per thousand
Face Bricks delivered to site in stretcher bond
pointed with 6mm square deep recessed horizontal
and vertical joints including labour, profit, wastage
etc:**

26	Extra over brickwork for face brickwork.	m2	8 661
27	Ditto, but half brick walls pointed on both sides.	m2	2 290
28	Ditto, but in internal walls to dado level.	m2	1 816
29	Extra over brickwork for facing brick piers.	m2	515
30	Extra over brickwork for facing brick columns.	m2	1 110
31	Extra over brickwork for brick-on-edge window cill built in soldier course flush with dado wall.	m	847

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<u>JOINT SEALANTS, ETC.</u>				
<u>10mm SIKASIL-728NS:</u>				
3	In joint sealing and pointing all round external window and door frames.	m	547	
<u>15 x 6mm SIKAFLEX-PRO 2HP:</u>				
4	In saw-cut joint filling.	m	353	
<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc.</u>				
5	Between timber or metal door or window frames and face brick / plaster reveal.	m	1 191	
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WATERPROOFING

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Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 5</u></p> <p><u>ROOF COVERINGS, ETC.</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary products in descriptions:</u></p> <p>Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.</p> <p><u>Fixing:</u></p> <p>Fixing shall be done according to SABS 1200HB with minimum 225mm end laps.</p> <p><u>Guarantee:</u></p> <p>The contractor will be required to provide a written guarantee, stating that:</p> <ol style="list-style-type: none"> 1. The roof sheeting is of the specified thickness. 2. The client is indemnified against any defects, including colour deterioration for a minimum period of 15 years. <p><u>Pricing:</u></p> <p>Prices for roof covering and cladding are to include for all necessary drive screws, hook bolts, sheet bolts, nuts, washers, etc., for drilling holes for screws and bolts including removing all swarf from the sheeting and all right angle cutting and waste (Measured net).</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 2 BUILDING WORKS Bill No. 5 ROOF COVERINGS</p>			<p style="text-align: right;">R</p>

CORRUGATED METAL SHEETING AND ACCESSORIES

0.8mm Chromadek Klip-Tite roof sheeting coated outside and galvanized inside in single lengths, fixed to 38 x 38mm battens (elsewhere):

1	Roof covering with pitch not exceeding 25 degrees.	m2	13 735
<u>0.8mm Nominal thickness ditto, but flashings:</u>			
2	Ridge capping (CODE FS3) 462mm girth to be brown built supa-clad, three times bent along girth and notched on site to suit roof profile.	m	782
3	Hip capping 550mm girth.	m	262
4	Barge flashing 580mm girth.	m	156
5	Valley flashing 550mm girth.	m	249

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ROOF COVERINGS

ROOF INSULATION

25mm Thick heavy industrial grade reinforced aluminium foil insulation double sided, heavy grammage reflective foil laminate incorporating eight layers of aluminium foil, reinforcing scrim, Kraft paper and polyethylene, tested for conformance with SABS 1381: Part IV-1985, with Class 1 fire rating in accordance with SABS 0177: Part III-1981 and BS 476 part 5, 6 and 7, secured to each truss/rafter with 38 x 3.2 x 1 100mm hardboard counter batten strips positioned flush with the bottom edge of the material thus leaving 150mm overlap exposed at the top for the next layer and 150mm overlap thereafter on each 1250mm width roll. All to be fixed in accordance with manufacturers specification:

6	Insulation laid taut under battens and fixed concurrent with roof covering including galvanised steel straining wires, laps, etc.	m2	10 258
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	<p><u>BILL NO. 6</u></p> <p><u>CARPENTRY & JOINERY</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary products in descriptions:</u></p> <p>Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.</p> <p><u>Prefabricated roof trusses:</u></p> <p>Prefabricated timber roof trusses shall be constructed of South African pine by a firm of specialist designer manufacturer's as approved by the Architect.</p> <p>Prices must include for all cross and windbracing according to the manufacturer's instruction.</p> <p>Prices must include for the design, plans and approval of all timber trusses and no claim shall be considered.</p> <p>Trusses shall be assembled in truss fabricating jigs with the truss having the proper camber, all tightly clamped together with joints secured using approved connector plates of galvanised steel sheet. Connector plates shall be pressed into the timber simultaneously from both sides of the truss with a hydraulic press capable of exerting such pressure as will ensure complete penetration of the teeth into the timber.</p> <p>The connector plates shall be of such size as will ensure that the joints so made will adequately withstand the forces exerted on the joints.</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 2 BUILDING WORKS Bill No. 6 CARPENTRY AND JOINERY</p>			<p style="text-align: right;">R</p>

Approval of pre-fabricated roofing systems, whether measured as an alternative or not, shall be subject to the following requirements:

(a) The Manufacturer of the pre-fabricated trusses shall hold a certificate of competence issued by the Insitute for Timber Construction.

(b) A polyester print, size A1 having a minimum thickness of 0,5mm, shall be submitted by the Contractor to the Regional Representative at an early stage for approval by the Directorate: Structural Engineering Services.

(c) The drawings shall be signed by a Registered Professional Engineer whose name appears on the Departmental panel for structural work.

(d) In the case of systems buildings, approval shall be given with submission of the contract drawings on acceptance of the tender.

The following minimum information shall be shown on the drawings:

(a) Details of the roof system with the position of the rafters and purlins indicated thereon as well as typical elevations.

(b) Bracing as recommended by the Institute for Timber Construction.

(c) Sizes and grading of the timber components.

(d) Truss sizes, e.g. height of ridge or angle of pitch.

(e) Plate sizes for every construction point. (Code numbers only are deemed insufficient).

(f) Seperate connection details for hip, valley and jack rafters.

(g) Maximum spacing for purlins and brandering to ceilings shall be according to Subclauses 7.6.1 and 7.6.2 and Clauses 7.8, 7.9 and 9.5.

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(h) The type of roof covering as well as the design load. Over and above the supervision undertaken by the Representative / Agent, the Truss Fabricator or his Design Engineer shall inspect the completed roof structure and issue a certificate of confirmation to the Department that:

"The roof structure(s) has (have) been erected in accordance with the Design Engineer's drawings, as accepted by the Department, and the relevant details given in the manual "THE ERECTION AND BRACING OF TIMBER ROOF TRUSSES" issued by the National Timber Research Institute and the Institute for Timber Construction".

Joinery:

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

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

Fixing:

All nailing of timber roof trusses, purlins, etc. shall be done with galvanised nails. In coastal areas, copper, aluminium or stainless steel nails shall be used.

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

Where items are described as "bolted" the bolts have been measured elsewhere.

ROOFS ETC.

Wrought S.A. Pine.

1	38 x 114mm Wall plate.	m	10 932
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**PREFABRICATED TIMBER ROOF TRUSSES,
ETC.**

The following is applicable in respect of roof trusses, trusses not exceeding 25 degree pitch, maximum 1200mm centers. Roof covering Chromadek Klip-Tite roof sheeting coated outside and galvanized inside including 50 x 76mm timber purlins at maximum 700mm centers. runners, bracing, cleats, brackets, bolts, etc., supplied and fixed complete. The contractor is to confirm dimensions from the Architect and confirm actual dimensions on site before fabrication (wall plates elsewhere measured):

2	Roof construction to double pitched roof with four gable ends, 46.01 x 22.37m overall on plan x 2500mm high overall, including trusses, jack rafters, permanent bracing and 50 x 76mm purlins at 700mm centres maximum for roof covering (wall plates elsewhere) - Block A.	No	1
3	Trusses for rectangular shaped building, size overall 9 880 x 4 690mm on plan (Admin - Podium).	No	1
4	Roof construction to double pitched roof with five hipped ends, 45.80 x 41.00m overall on plan x 2669mm high overall, with 21.00 x 16.20m opening in the centre, including trusses, jack rafters, permanent bracing and 50 x 76mm purlins at 700mm centres maximum for roof covering (wall plates elsewhere) - Block B.	No	1
5	Roof construction to double pitched roof, size 52.63 x 38.53m overall on plan x 1900mm high overall, with 32.20 x 15.82m opening in the centre, including trusses, jack rafters, permanent bracing and 50 x 76mm purlins at 700mm centres maximum for roof covering (wall plates elsewhere) - Block C.	No	1

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6	Roof construction to double pitched roof, size 61.33 x 38.46m overall on plan x 1894mm high overall, with 41.20 x 15.70m opening in the centre, including trusses, jack rafters, permanent bracing and 50 x 76mm purlins at 700mm centres maximum for roof covering (wall plates elsewhere) - Block D.	No	1	
7	Roof construction to double pitched roof with two gable ends, 21.61 x 7.94m overall on plan x 1320mm high overall, including trusses, jack rafters, permanent bracing and 50 x 76mm purlins at 700mm centres maximum for roof covering (wall plates elsewhere) - Sports facility	No	1	
8	Roof construction to double pitched roof with two gable ends, 47.46 x 29.70m overall on plan x 1720mm high overall, with 36.00 x 5.75m opening in the centre including trusses, jack rafters, permanent bracing and 50 x 76mm purlins at 700mm centres maximum for roof covering (wall plates elsewhere) - Block EP.	No	1	
<p><u>The following is applicable in respect of roof trusses, trusses not exceeding 25 degree pitch, maximum 950mm centers. Roof covering Chromadek Klip-Tite roof sheeting coated outside and galvanized inside including 50 x 76mm timber purlins at maximum 800mm centers,runners, bracing, cleats, brackets, bolts, etc., supplied and fixed complete. The contractor is to confirm dimensions from the Architect and confirm actual dimensions on site before fabrication (wall plates elsewhere measured):</u></p>				
9	Roof construction to double pitched roof with two gable ends, 5.58 x 8.12m overall on plan x 1900mm high overall, including trusses, jack rafters, permanent bracing and 50 x 76mm purlins at 800mm centres maximum for roof covering (wall plates elsewhere) - Block J.	No	1	
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10	Roof construction to double pitched roof with two gable ends, 8.56 x 5.35m overall on plan x 1200mm high overall, including trusses, jack rafters, permanent bracing and 50 x 76mm purlins at 800mm centres maximum for roof covering (wall plates elsewhere) - Block O.	No	1		
<u>SKIRTINGS</u>					
<u>Wrought meranti:</u>					
11	19 x 76mm Skirtings including 19mm quadrant bead, nailed to walls including all nails to be punched and filled	m	2 915		
12	16 x 150mm dado rail, nailed to walls including all nails to be punched and filled.	m	2 384		
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<u>CORNICES</u>				
<u>SA Pine:</u>				
13	Purpose made 76 x 50mm SA Pine cornice fixed to walls, as per Architect's detail (Drawing No. 1613.3 - AR - DES - 600).	m	2 915	
<u>Wrought meranti:</u>				
14	19mm Quadrant trims fixed to eaves closures and veranda ceilings complete.	m	2 694	
<u>DOORS ETC.</u>				
<u>Standard approved semi solid meranti doors with 15 horizontal panels in projection:</u>				
15	44mm Thick single semi solid meranti door (D5), size 1050 x 2100mm high, all as indicated on Architect's door schedule attached to these bills of quantities.	No	13	
16	44mm Thick single semi solid meranti door (D8), size 900 x 2100mm high, all as indicated on Architect's door schedule attached to these bills of quantities.	No	2	
17	44mm Thick single semi solid meranti door (D9), size 850 x 2125mm high, all as indicated on Architect's door schedule attached to these bills of quantities.	No	33	
18	44mm Thick, double semi solid meranti door (D10), size 2100 x 2125mm high, all as indicated on Architect's door schedule attached to these bills of quantities.	No	1	
19	44mm Thick, single semi solid meranti door (D11), size 867 x 2125mm high, all as indicated on Architect's door schedule attached to these bills of quantities.	No	2	
20	44mm Thick, single semi solid meranti door (D12), size 1050 x 2125mm high, all as indicated on Architect's door schedule attached to these bills of quantities.	No	2	
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21	44mm Thick, single semi solid meranti door (D13), size 967 x 2125mm high, all as indicated on Architect's door schedule attached to these bills of quantities.	No	1		
	<u>Heavy duty door with horizontal slats on both sides:</u>				
22	40mm Thick heavy duty slat horizontal door (D-5) size 914 x 2032mm high with horizontal slats on both sides, all as indicated on Architect's door schedule attached to these bills of quantities.	No	108		
23	50mm Thick heavy duty slat horizontal door (D-12) size 914 x 2032mm high with horizontal slats on both sides, all as indicated on Architect's door schedule attached to these bills of quantities.	No	23		
24	40mm Thick heavy duty slat horizontal door (D-34), size 700 x 2032mm high with horizontal slats on both sides, all as indicated on Architect's door schedule attached to these bills of quantities.	No	5		
25	40mm Thick heavy duty slat horizontal double door size 1609 x 2032mm high each side with horizontal slats on both sides, all as indicated on Architect's door schedule attached to these bills of quantities.	No	1		
	<u>Meranti hollow core leaf or similar approved:</u>				
26	44mm Thick meranti hollow core door (D-15) size 864 x 1000mm high.	No	20		
	<u>FRAMES ETC.</u>				
	<u>Wrought meranti:</u>				
27	Half frame for door (D15) opening size 864 x 1200mm.	No	20		
	<u>Sundries:</u>				
28	32 x 70mm Shaped meranti hardwood timber weather bar fixed on door.	m	321		
	Carried to Collection				R
	Section No. 2 BUILDING WORKS Bill No. 6 CARPENTRY AND JOINERY				

FITTINGS

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

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

All joinery must be completed after the Architect's approval of samples.

Note:

All dimensions to be confirmed on site.

29	Tuck shop cupboard unit, size approximately 1860mm long x 600mm wide x 902mm high, including hole for drop-in sink (sink elsewhere measured) including all finishes, all as indicated on Elevation 1 on Architect's drawing No. GC2202_Thabotona PS_JL_02, annexed to these bills of quantities.	No	1
30	Admin Kitchen L-Shaped cupboard unit, size approximately 4576mm long x 600mm wide x 902mm high, including hole for double drop-in sink (sink elsewhere measured) including all finishes, all as indicated on Elevation 1 on Architect's drawing No. GC2202_Thabotona PS_JA_02, annexed to these bills of quantities.	No	1
31	Admin office cupboard unit, size approximately 4548mm long x 600mm wide x 900mm high, including all finishes, all as indicated on Elevation 1 on Architect's drawing No. GC2202_Thabotona PS_JA_04, annexed to these bills of quantities.	No	1
32	Admin security office cupboard unit, size 3721mm long x 600mm wide x 900mm high, including all finishes and worktops, all as indicated on Architect's drawing No. GC2202_Thabotona PS_JA_04, annexed to these bills of quantities.	No	1

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33	Resource room L-Shaped cupboard unit, size approximately 2760mm long x 600mm wide x 900mm high, including hole for drop-in sink (sink elsewhere measured) including all finishes, all as indicated on Architect's drawing No. GC2202_Thabotona PS_JEP_04, annexed to these bills of quantities.	No	1	
34	Admin Accounting office cupboard unit, overall size approximately 4090mm long x 600mm wide x 900mm high, including all finishes and worktops to wall openings, all as indicated on Elevation 1 on Architect's drawing No. GC2202_Thabotona PS_JA_03, annexed to these bills of quantities.	No	1	
35	Computer room cupboard unit, size approximately 3805mm long x 461mm wide x 900mm high, including all finishes, all as indicated on Elevation 1 & 2 on Architect's drawing No. GC2202_Thabotona PS_JA_05, annexed to these bills of quantities.	No	1	
36	Guard house kitchenette L-Shaped cupboard unit, size approximately 1254mm long x 1294mm long x 600mm wide x 902mm high, including hole for drop-in sink (sink elsewhere measured) including all finishes, all as indicated on Elevation 1 on Architect's drawing No. GC2202_Thabotona PS_JJ_02, annexed to these bills of quantities.	No	1	
37	Guard house cupboard unit, size approximately 2420mm long x 600mm wide x 902mm high, including all finishes, worktops, all as indicated on Elevation 1 on Architect's drawing No. GC2202_Thabotona PS_JJ_03, annexed to these bills of quantities.	No	1	
38	Pigeon hole unit, size 2700 x 472 x 1500mm high, including all finishes, all as indicated on Architect's drawing No. GC2202_Thabotona PS_JB_02 annexed to these bills of quantities.	No	94	
39	Tuck shop unit, size 3148mm long x 450mm wide x 902mm high, including all screws/bolts, brackets, angle irons, gusset plates, finishes, etc. all as indicated on Architect's drawing No. GC2202_Thabotona PS_JL_03, annexed to these bills of quantities.	No	1	
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40	Resource room acid storage cupboard unit, with shelves size 2450mm long x 300mm wide including all finishes, all as indicated on Architect's drawing No. GC2202_Thabotona PS_JEP_05, annexed to these bills of quantities.	No	1		
41	Laminated saligna worktop fixed to wall at 1000mm high, size approximately 1800mm long x 750mm wide, including all screws/bolts, brackets, angle irons, gusset plates, finishes, etc. all as indicated on worktop Section on Architect's drawing No. GC2202_Thabotona PS_JL_04, annexed to these bills of quantities.	No	1		
42	Science lab unit, size 3000mm long x 600mm wide x 1100mm high, including holes for lab sinks (sinks e/m), including all finishes, all as indicated on Architect's drawing No. GC2202_Thabotona PS_JEP_02, annexed to these bills of quantities.	No	11		
43	Teacher's podium - 32mm Thick blackboard with hardwood veneer floor panels fixed onto pine bearers, size 4500 x 1900mm including all finishes, all as indicated on Architect's drawing No. GC2202_Thabotona PS_JEP_06, annexed to these bills of quantities.	No	1		
44	Science lab unit, size 2350mm long x 820mm wide x 900mm high, including hole for lab sink (sink elsewhere measured), including all finishes, all as indicated on Architect's drawing No. GC2202_Thabotona PS_JEP_03, annexed to these bills of quantities.	No	1		
45	Kitchen cupboard unit, size 1830mm long x 762mm wide x 902mm high, including all finishes, all as indicated on Elevation 1 on Architect's drawing No. GC2202_Thabotona PS_JB_03, annexed to these bills of quantities.	No	1		
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HARDWOOD TIMBER BENCH ETC

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

All joinery must be completed after the Architect's approval of samples.

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

Note:

All dimensions to be confirmed on site.

46	Timber bench on galvanised angle iron brackets, size 3300mm long x 450mm wide x 568mm high, including all screws/bolts, brackets, angle irons, gusset plates, finishes, etc. all as indicated on Seat Section 1 on Architect's drawing No. GC2202_Thabotona PS_JA_07, annexed to these bills of quantities.	No	1
47	Timber bench on galvanised angle iron brackets, size 3000mm long x 450mm wide x 560mm high, including all screws/bolts, brackets, angle irons, gusset plates, finishes, etc. all as indicated on Seat Section 1 on Architect's drawing No. GC2202_Thabotona PS_JB_03, annexed to these bills of quantities.	No	1
48	Timber bench on galvanised angle iron brackets, size 1920mm long x 450mm wide x 568mm high, including all screws/bolts, brackets, angle irons, gusset plates, finishes, etc. all as indicated on Seat Section 1 on Architect's drawing No. GC2202_Thabotona PS_JA_06, annexed to these bills of quantities.	No	1

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49	Timber bench on galvanised angle iron brackets, size 1800mm long x 429mm wide x 718mm high, including all screws/bolts, brackets, angle irons, gusset plates, finishes, etc. all as indicated on Architect's drawing No. GC2202_Thabotona PS_JL_04, annexed to these bills of quantities.	No	10		
<u>SCHOOL FURNITURE</u>					
<u>All furniture units to comply with SABS standards. Sizes and specifications to be in strict compliance to drawings and specifications</u>					
<u>DESKS, TABLES, ETC</u>					
50	Lower primary table size 1000 x 450 x 575mm high complete as per Figure 2.2 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660:2009	No	60		
51	Office desk with 3 drawer's-saligna size 1500 x 850 x 750 mm high complete as per Figure 5.2 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660:2009	No	4		
52	Teacher's desk with 2 drawer's size 1200 x 700 x 750mm high, complete as per Figure 4.2 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-2:2008.	No	50		
53	Office desk with two drawer's size 1500 x 850 x 750mm high, complete as per Figure 4.3 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-2:2008.	No	13		
54	Primary double combination desk size 1065 x 400 x 650mm high, complete as per Figure 3.1 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660:2009.	No	840		
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55	Computer table size 1200 x 700 x 750mm high, complete as per Figure 5.7 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-2:2008.	No	80		
56	Reading table size 1496 x 846 x 750mm high, complete as per Figure 8.2 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-2:2008.	No	16		
57	Study carrel double table size 1500 x 850 x 1150mm high, complete as per Figure 8.11 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-2:2008.	No	8		
58	Meeting table - oak melamine, complete as per Figure 6.18 attached to the back of these Bills of Quantities. All in compliance with SANS 1528-2:2008.	No	3		
59	1200 x 600 x 600 x 550mm high Reboni or similar approved tripezuim and rectangular 600 x 1200 x 550mm combination Grade R classroom tables	No	200		
<u>CHAIRS, ETC</u>					
60	Upholstered teacher's chair without arms complete as per Figure 7.1 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-1:2008.	No	188		
61	Upholstered teacher's chair with arms complete as per Figure 7.2 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-1:2008.	No	57		
62	Upholstered side chair without arms complete as per Figure 7.4 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-1:2008.	No	35		
Carried to Collection					
Section No. 2 BUILDING WORKS Bill No. 6 CARPENTRY AND JOINERY					R

63	Upholstered side chair with arms complete as per Figure 7.5 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-1:2008.	No	8		
64	Side chair with arms and sleigh base complete as per Figure 7.6 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-1:2008	No	55		
65	Low back swivel & tilt chair complete as per Figure 7.7 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-1:2008	No	8		
66	High back swivel & tilt chair complete as per Figure 7.8 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-1:2008	No	2		
67	Laboratory stool, complete as per Figure 9.4 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660: 2009.	No	40		
68	Laboratory stool, complete as per Figure 9.5 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660: 2009.	No	1		
69	Grade 'R' chair - Polypropylene, complete as per Figure 1.1 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660:2009.	No	120		
70	Lower primary chair - Polypropylene, complete as per Figure 1.2 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660: 2009.	No	200		
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<u>FILING CABINETS, ETC</u>				
71	Stationary cupboard steel size 900 x 450 x 1800mm high complete as per Figure 5.9 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660:2009	No	67	
72	Stationary cupboard steel size 900 x 360 x 1500mm high complete as per Figure 5.9 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660:2009	No	8	
73	Computer table size 1200 x 700 x 750 mm high complete as per Figure 5.7 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660:2009	No	20	
74	Glazed door bookcase size 900 x 360 x 1500mm high complete as per Figure 5.6 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660:2009	No	3	
75	Filing cabinet steel size 465x 625 x 1300mm high complete as per Figure 5.8 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660:2009	No	14	
76	Filing cabinet oak melamine size 487x 550 x 1350mm high complete as per Figure 6.11 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660:2009	No	12	
77	Shelving unit 4 tier oak melamine size 900 x 300 x 1500mm, complete as per Figure 6.16 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-3:2009.	No	3	
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Section No. 2 BUILDING WORKS Bill No. 6 CARPENTRY AND JOINERY				R

78	Bookshelf double - saligna, complete as per Figure 8.8 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-3:2009.	No	4		
79	Catalogue cabinet, complete as per Figure 8.9 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-3:2009.	No	3		
80	Book Trolley, complete as per Figure 8.12 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-3:2009.	No	4		
<u>PINNING BOARDS, WRITING BOARDS, ETC</u>					
81	Notice board/Pin board, complete as per Figure 8.15 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 660: 2009.	No	107		
<u>HANGERS, ETC</u>					
82	Coat and hat stand, complete as per Figure 5.11 of the School and Office Furniture Specifications, attached to the back of these Bills of Quantities. All in compliance with SANS 1528-2:2008.	No	20		
<u>BEDS, ETC</u>					
83	Steel frame single bed - size 1910 x 910 x 430mm high including plastic foam mattress or similar approved suitable for bed size 1910 x 910 x 150mm thick. As per Drawing No: TGR-A6001 Rev 1.0	No	7		
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Section No. 2

BUILDING WORKS

Bill No. 6

CARPENTRY AND JOINERY

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Section No. 2

BUILDING WORKS

Bill No. 6

CARPENTRY AND JOINERY

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 7</u></p> <p><u>CEILING, PARTITIONS AND ACCESS FLOORING</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary products in descriptions:</u></p> <p>Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.</p> <p><u>Descriptions:</u></p> <p>Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.</p> <p>Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.</p> <p><u>SUSPENDED CEILINGS</u></p> <p><u>Acoustic ceiling tiles size 1200 x 600mm x 6mm thick laid on and including aluminium main tees, cross tees, hold-down clips, wedges, etc., all suspended with aluminium hangers at hanger centres not exceeding 1200mm:</u></p> <p>1 Ceiling suspended not exceeding 1m. below timber/steel purlins at ± 1,4m centres (trusses at ± 1,0m centres). m2 5 278</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 2 BUILDING WORKS Bill No. 7 CEILING PARTITIONS AND ACCESS FLOORING</p>			
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	<u>10mm Thick Rhino Gypsum suspended ceiling panels with vinyl coating/sheeting on 1200 x 600mm grid:</u>				
2	Ceiling suspended not exceeding 1m. below timber/steel purlins at ± 1,4m centres (trusses at ± 1,0m centres).	m2	673		
	<u>8mm Thick fibre cement suspended ceiling on 1200 x 600mm grid:</u>				
3	Ceiling suspended not exceeding 1m. below timber/steel purlins at ± 1,4m centres (trusses at ± 1,0m centres).	m2	838		
	<u>NAILED UP AND SCREW UP CEILINGS</u>				
	<u>9mm Gypsum plasterboard knock up ceiling boards with skimmed joints:</u>				
4	Ceilings including 38 x 50mm sawn softwood bandering at 400mm centres with cross bandering at 400mm centres and at joints, ends of sheets and at light fittings, etc.	m2	1 080		
5	Extra over ceiling for 600 x 600mm hinged trap door of wrought softwood rebated framing with one sawn softwood cross brander covered with ceiling board and fitted flush in opening, including necessary trimmers all around.	No	84		
	<u>1200 x 600mm Fibre-cement ceiling boards with H type joint strips:</u>				
6	Ceilings including 38 x 50mm sawn softwood bandering at 400mm centres with cross bandering at joints, ends of sheets and at light fittings, etc.	m2	1 785		
7	Extra over ceiling for 600 x 600mm hinged trap door of wrought softwood rebated framing with one sawn softwood cross brander covered with ceiling board and fitted flush in opening, including necessary trimmers all around.	No	77		
	<u>INSULATION</u>				
	<u>125mm thick aerolite ceiling insulation laid according to manufacturers specification with combination of 25mm sisalation membrane:</u>				
8	Above ceiling boards.	m2	7 869		
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Bill No. 7

CEILINGS PARTITIONS AND ACCESS FLOORING

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Bill No. 7
CEILINGS PARTITIONS AND ACCESS FLOORING

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Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 8</u></p> <p><u>FLOOR COVERINGS, WALL LININGS, ETC</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary products in descriptions:</u></p> <p>Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.</p> <p><u>Cleaning:</u></p> <p>Rates for floor covering shall include for proper cleaning on completion.</p> <p><u>Fixing:</u></p> <p>Floor coverings, wall linings, etc. shall, where applicable, be fixed with adhesive as recommended by the manufacturers of the flooring, linings, etc.</p> <p><u>Sizes:</u></p> <p>Sizes and patterns of vinyl sheeting described hereunder may vary from the final specification.</p> <p>No claim for extras in respect of additional labour or wastage will be entertained should final sizes vary from those described hereunder.</p>			
	Carried to Collection			R
	<p>Section No. 2 BUILDING WORKS Bill No. 8 FLOOR COVERINGS</p>			

Rates:

Rates for vinyl sheeting are deemed to include for laying in patterns in differing contracting colour and in one or alternating tones of colours as any be specified by the Architect.

FLOOR COVERINGS

2mm Pur vinyl floor sheeting. Directional or non-directional sheeting of cement screed, that is free from bumps and dents. (Welding strips to match colour):

1	On floors.	m2	4 468	
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2mm SD vinyl floor sheeting. Directional or non-directional sheeting of cement screed, that is free from bumps and dents. (Welding strips to match colour):

2	On floors.	m2	29	
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2mm Acoustic vinyl floor sheeting. Directional or non-directional sheeting of cement screed, that is free from bumps and dents. (Welding strips to match colour):

3	On floors.	m2	614	
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Timber flooring planks including 50mm plywood boards, sound shock sponge and treating with epoxy resin

4	On floors.	m2	384	
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Section No. 2
BUILDING WORKS
Bill No. 8
FLOOR COVERINGS

POLISH, SEALERS, ETC

Scrub with neutral detergent and seal with three coats water based polymer emulsion or equally approved sealer:

5	On vinyl flooring.	m2	5 111
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BUILDING WORKS
Bill No. 8
FLOOR COVERINGS

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BUILDING WORKS

Bill No. 8

FLOOR COVERINGS

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Bill No. 8
FLOOR COVERINGS

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 9</u></p> <p><u>IRONMONGERY</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary products in descriptions:</u></p> <p>Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent:</p> <p><u>Finishes to ironmongery:</u></p> <p>Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list:</p> <p>BS Satin bronze lacquered CP 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 Fixing</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 2 BUILDING WORKS Bill No. 9 IRONMONGERY</p>			<p style="text-align: right;">R</p>

Descriptions of wall mounted and floor standing ironmongery items shall be deemed to include for fixing in position and all fixing accessories.

Descriptions of proprietary items shall be deemed to include fixing in position and all fixing accessories.

HINGES, BOLTS, ETC.

Manufactured by "Geze" or similar approved:

1	Hinges supplied by frame	No	579
2	Aluminium flush bolt by other.or similar approved	No	38
3	150 x 20mm Satin chrome flush bolt, or similar approved(Code: 120/150)	No	30

CATCHES, CABIN HOOK, ETC.

Manufactured by "Geze" or similar approved:

4	Stainless steel hat & coat hook rubber buffer (Code: 154/69)	No	106
5	250mm Cabin hook (Code106-250/76)	No	2

LOCKS

Manufactured by "Geze" or similar approved:

6	76mm commercial cylinder sashlock (code: 325/51) or similar approved.	No	146
7	Mortice W/C indicator ,disabled (CODE: 195/01).	No	117
8	76mm Profile cylinder deadlocks (code:342/51).	No	60
9	Profile cylinder deadlocks (code:642/35).	No	5
10	43mm nickel plated single cylinder master keyed.	No	42
11	Geze 50mm brass padlock master keyed.	No	32
12	66mm nickel plated double cylinder master keyed.	No	163

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BUILDING WORKS
Bill No. 9
IRONMONGERY**

13	66mm Five pin nickel plated k/cylinder 3K N.	No	3		
14	66mm Nickel plated Knob cylinder master keyed.	No	16		
15	Nickel plated rebate conversion kit for 76mm locks (Code: 130/81).	No	15		
16	Stainless Steel narrow style cylinder escutcheon.	Pairs	19.0		
17	Stainless steel Prof cylinder escutcheon(code:ED908/CYL)	Pairs	192.5		
18	Profile cylinder deadlock with roller bolt latch	No	3		
19	Stainless steel adjustable roller latch(Code: 661/32)	No	18		
<u>HANDLES</u>					
<u>Manufactured by "Geze" or similar approved:</u>					
20	330 x 305 x 25 stainless steel bolt through pull handle (Code:JD213/305)	No	20		
21	130 x 111 x 19 back to back S.S pull handle (code: JD213/111)	Pairs	106.0		
22	375 x 350 x 2mm Stainless Steel straight tubular pull handle BTB (BTB fixing sets included)- (Code: JDC215/350-BTB).or similar approved	No	38		
23	19mm daytona lever on rose com(code:EDD/101C) or similar approved.	Pairs	133.0		
24	Profile cylinder door lock R/bolt latch(Code:622/35)	No	11		
25	19 mm daytona lever on rose (code:EDD/101)	Pairs	12.0		
<u>DOOR CLOSERS</u>					
<u>Manufactured by "Geze" or similar approved:</u>					
26	Door closer with Parallel arm bracket Sr (Code: TS2000VP) or similar approved.	Sets	33.0		
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Section No. 2 BUILDING WORKS Bill No. 9 IRONMONGERY					R

27	Door closer complete with standard and Parallel arm bracket (Code: TS4000P) or similar approved.	No	10		
28	Door closer with G/rail & arm Sr (code:TS2000) or similar approved	No	31		
29	Door closer (Code: TS3000).complete with ISM guide rail, or similar approved.	No	5		
<u>PUSH PLATES AND KICK PLATES</u>					
<u>Manufactured by "Geze" or similar approved:</u>					
30	160 x 300 x 1.6mm thick Stainless Steel push plate (Code: 075/300). or similar approved	No	67		
31	65 x 50 ring flush pull (Code: 056/76)	No	24		
32	160 x 160 x 1.2 stainless steel push plate (Code:079/160E)	No	51		
33	300 x 0,9mm thick Stainless steel kick plate formed over the top of the door, bent twice extending 50mm down top edge of door on both sides (Code:080/300).	No	428		
34	160 x 160 x 2mm Aluminium push plate (Code: 069/160E)	No	32		
<u>SUNDRIES</u>					
<u>Manufactured by "Geze" or similar approved:</u>					
35	stainless steel front mounted doorstop (code: 140/69) or similar approved	No	39		
36	ALI/SAT anod front mounted door stops(code:140/01) or similar approved	No	133		
37	160 x 300 x 1.6mm Stainless steel C/W JD213 (code:075/160) or similar approved.	No	49		
38	Stainless steel double action floor spring (Code: TS500)	No	2		
39	Dust keep	No	34		
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40	5.4mm PAT F/Screw NP40 (code:963/03). or similar approved.	No	385		
41	M5 Patent fixing screws or similar approved.	No	207		
42	Adaptor bracket or similar approved.	No	28		
43	Door selector for 1066mm -1878mm opening or similar approved	No	14		
<u>PELMETS AND CURTAIN TRACKS</u>					
<u>Manufactured by Windovert or equally approved:</u>					
44	Horizontal Venetian blinds, size 900 x 900mm high.	No	2		
45	Horizontal Venetian blinds, size 1200 x 900mm high.	No	16		
46	Horizontal Venetian blinds, size 1800 x 2200mm high.	No	15		
47	Double Roller textured blinds, for windows size 1022 x 654mm high enclosed in one neat cassette system with a minimal footprint in your window reveal, controlled separately, screen fabric to allow daytime views and privacy and a full blackout for full night control and privacy.	No	1		
48	Double Roller textured blinds, for windows size 1143 x 854mm high enclosed in one neat cassette system with a minimal footprint in your window reveal, controlled separately, screen fabric to allow daytime views and privacy and a full blackout for full night control and privacy.	No	241		
49	Double Roller textured blinds, for windows size 2667 x 1641mm high enclosed in one neat cassette system with a minimal footprint in your window reveal, controlled separately, screen fabric to allow daytime views and privacy and a full blackout for full night control and privacy.	No	99		
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LETTERS, NAMEPLATES, ETC.

Sign plates:

50	365 x 80 x 2mm Thick Anodised silver engraved nameplate with the letters "ENTRANCE" fixed above door frame, all as indicated in the Architect's drawings.	No	5
51	375 x 80 x 2mm Thick Anodised silver engraved nameplate with the letters "RECEPTION" fixed above door frame, all as indicated in the Architect's drawings.	No	2
52	382 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "ADMINISTRATION" fixed above counter frame, all as indicated in the Architect's drawings.	No	2
53	315 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "HOD'S OFFICE" fixed above door frame, all as indicated in the Architect's drawings.	No	15
54	325 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "ACCOUNTING" fixed above counter frame, all as indicated in the Architect's drawings.	No	2
55	369 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "SECURITY ROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	1
56	369 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "CARETAKER ROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	1
57	365 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "PASTORAL CARE" fixed above door frame, all as indicated in the Architect's drawings.	No	1

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58	205 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "KITCHEN" fixed above counter frame, all as indicated in the Architect's drawings.	No	2		
59	433 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "PRINCIPAL'S OFFICE" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
60	393 x 100 x 2mm Thick Anodised silver engraved nameplate with the letters "VICE - PRINCIPAL'S OFFICE" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
61	340 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "SICK - ROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	6		
62	370 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "PRINTING ROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
63	295 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "STAFF ROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
64	445 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "PROCESSING ROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
65	365 x 100 x 2mm Thick Anodised silver engraved nameplate with the letters "MULTI - PURPOSE ROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
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66	365 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "ARCHIVE ROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
67	365 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "DB ROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	9		
68	293 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "STOREROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	60		
69	335 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "FIRE HOSE RAIL" fixed above door frame, all as indicated in the Architect's drawings.	No	13		
70	365 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "CLASSROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	47		
71	325 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "SERVICE DUCT" fixed above door frame, all as indicated in the Architect's drawings.	No	12		
72	365 x 100 x 2mm Thick Anodised silver engraved nameplate with the letters "MULTI - PURPOSE CLASSROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	3		
73	197 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "LIBRARY" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
74	365 x 100 x 2mm Thick Anodised silver engraved nameplate with the letters "COMPUTER LAB" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
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75	300 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "SCIENCE LAB" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
76	393 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "RESOURCE ROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
77	390 x 80 x 2mm Thick Anodised silver engraved nameplate with the letters "TUCK SHOP" fixed above door frame, all as indicated in the Architect's drawings.	No	2		
78	320 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "SCHOOL HALL" fixed above door frame, all as indicated in the Architect's drawings.	No	6		
79	382 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "ADMINISTRATION" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
80	375 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "CLEANERS STORE" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
81	422 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "DELIVERY PASSAGE" fixed above door frame, all as indicated in the Architect's drawings.	No	2		
82	375 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "GROCERY STORE" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
83	360 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "WASHING AREA" fixed above door frame, all as indicated in the Architect's drawings.	No	2		
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84	380 x 100 x 2mm Thick Anodised silver engraved nameplate with the letters "CLEAN UTENSILS/SERVING AREA" fixed above door frame, all as indicated in the Architect's drawings.	No	2		
85	370 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "COOKING AREA" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
86	320 x 100 x 2mm Thick Anodised silver engraved nameplate with the letters "PREPARATION AREA" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
87	430 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "REFUSE YARD" above door frame, all as indicated in the Architect's drawings.	No	1		
88	305 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "PLANT ROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	1		
89	300 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "COLD ROOM" fixed above door frame, all as indicated in the Architect's drawings.	No	2		
90	430 x 50 x 2mm Thick Anodised silver engraved nameplate with the letters "GENERATOR ROOM" above door frame, all as indicated in the Architect's drawings.	No	1		
91	430 x 100 x 2mm Thick Anodised silver engraved nameplate with the letters "GIRLS CHANGE ROOM" above door frame, all as indicated in the Architect's drawings.	No	1		
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92	430 x 100 x 2mm Thick Anodised silver engraved nameplate with the letters "BOYS CHANGE ROOM" above door frame, all as indicated in the Architect's drawings.	No	1		
93	300 x 300 x 2mm Thick Silver Anodised silver engraved sign with male/female Pictogram fixed to door, all as indicated on the Architect's drawings.	No	9		
94	300 x 300 x 2mm Thick Silver Anodised silver engraved sign with male pictograms fixed to door, all as indicated on the Architect's drawings.	No	14		
95	300 x 300 x 2mm Thick Silver Anodised silver engraved sign with female pictograms fixed to door, all as indicated on the Architect's drawings.	No	14		
96	300 x 300 x 2mm Thick Silver Anodised silver engraved sign with paraplegic pictograms fixed to door, all as indicated on the Architect's drawings.	No	10		
97	600 x 300 x 4mm Thick Anodised Silver engraved Photoluminescent sign with Red Reverse and Fire Extinguisher Pictograms, fixed to wall as per Fire Consultant Specification or similar approved	No	73		
98	900 x 300 x 4mm Thick Anodised Silver engraved Photoluminescent sign with Red Reverse, Fire Extinguisher, and Hose Rail Pictograms, fixed to wall as per Fire Consultant Specification or similar approved.	No	19		
99	900 x 300 x 4mm Anodised silver engraved Photoluminescent sign with Fire Extinguisher, Hose Rail and Red Reverse Pictograms, fixed to wall as per Fire Consultant Specification or similar approved.	No	39		
100	600 x 300 x 2mm Anodised silver engraved sign with Directional and Fire Escape Pictograms, fixed to wall or door as per Fire Consultant Specialist or similar approved.	No	96		
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101	900 x 300 x 2mm Thick Anodised silver engraved sign with Directional, Stairs and Fire Escape Pictograms, fixed to wall or door as per Fire Consultant Specialist or similar approved.	No	2		
	<u>SUNDRIES</u>				
102	19mm Stainless steel chromium plated towel rail, 600mm long, with end brackets plugged to plastered or tiled wall.	No	34		
103	Wall safe approximately 280 x 310 x 230mm deep, bolted to wall with expansion bolts to inside of safe with integrated security lock.	No	5		
	<u>Cabinets:</u>				
104	380 x 610mm Built in standard white lockable medicine cabinet complete with mirrors on doors, shelves, etc. as approved.	No	20		
	<u>BATHROOM FITTINGS</u>				
105	Automatic hands free hand dryer, size 284 x 202 x 248mm deep Grade 304 1,2/1,5mm thick 18/10 stainless steel with 2 vandal proof lock screws and key wrench, plugged and screwed to the wall with stainless steel screws, 200W motor connected to 230/240 volt power supply with 5 year warranty.	No	37		
106	Chrome plated toilet brush set (code AC-0913-100) size 155 x 120x 375mm high.	No	107		
	<u>Stainless steel 32mm diameter grab rails grade 304 stainless steel:</u>				
107	Franke CNTX PAR Grade 304 32mm diameter 18/10 stainless steel paraplegic grab rails with franke fine grip (Code 359885) size 640 x 640 x 96mm deep, plugged and screwed to the wall with stainless steel screws.	No	8		
108	Franke CNTBR Grade 304 18/10 stainless steel 32mm diameter cistern & ramp flush valve back rail with franke fine grip (Code 2510014) size 750 x 260mm, plugged and screwed to the wall with stainless steel screws.	No	8		
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	<u>Assisted bathroom shower seat:</u>				
109	Hi-Tech or Equally Approved Stainless Products 32mm diameter grade 304 stainless steel foldaway shower seat (code: 32), plugged and screwed to walls with stainless steel screws.	No	7		
	<u>Soap rack:</u>				
110	Chrome plated soap holder size 136mm long, plugged and screwed to wall.	No	1		
111	Hands free soap dispenser, colour white, overall size 184 x 110 x 264mm high installed by an installation team.	No	102		
112	Standard 150 x 150mm white stainless steel soap holder with a dip tray.	No	49		
	<u>Toilet roll holder:</u>				
113	Grade 304 1,2/1,5mm thick 18/10 satin stainless steel toilet roll holders with spindle system, size 304 x 156 x 140,7mm deep for 2 rolls maximum 108mm diameter, cylinder lock with standard Franke key, plugged and screwed to the wall with stainless steel screws.	No	106		
114	Franke or Equally Approved toilet roll holder for 4 rolls for wall mounting, stainless steel, surface satin finished, material thickness 0.8 mm, with spindle system, cylinder lock with Franke or Equally Approved standard key, including stainless steel screws and dowels. Product Name: RODX674B or Equally Approved fixed to wall	No	80		
	<u>Towel Rail</u>				
115	19 x 600mm Stainless steel chromium plated towel rail complete with chromium plated end brackets plugged and screwed to wall	No	10		
116	Chrome plated double towel rail size 590 x 130mm wide, plugged and screwed to wall.	No	45		
	<u>Waste bin:</u>				
117	Disposer plus stainless steel wall mounted waste bin, overall size 300 x 250 x 500mm high installed by an installation item.	No	77		
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118	<p>Franke Rodan RODX605 or Equally Approved, 8mm thick satin finished stainless steel waste bin (Code: 2120097), size 355mm x 168mm x 460mm high with capacity of 23 litres and cylinder lock and standard Franke or Equally Approved key, plugged and screwed to the wall with stainless steel screws.</p>	No	71	R
<u>SHELVES ETC</u>				
119	<p>Chrome plated glass shelf size 600 x 120mm wide, plugged and screwed to wall.</p>	No	6	
<p><u>"Wildberry" or equally approved free standing proprietary type steel shelving units with standard powder coated finish, including heavy duty uprights, open base foot pieces, shelf brackets, shelves, spacers, top rails, top finishing plates and adjustable book clips:</u></p>				
120	<p>2200 x 600 x 1925mm 6 Tier Heavy Duty Shelves (Colour: Black).</p>	No	21	
<p><u>PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC.</u></p>				
<p><u>Meranti veneered 9mm plywood panel in frame for Honours Board plugged to wall with 5 x 90mm brass screws.</u></p>				
121	<p>Honours board size 1200 x 1500mm overall.</p>	No	6	
<p>Carried to Collection</p>				
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Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 10</u></p> <p><u>STRUCTURAL STEELWORK</u></p> <p><u>PREAMBLES</u></p> <p><u>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Descriptions of bolts shall be deemed to include nuts and washers.</p> <p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <p>NOTE: All steel will be painted unless otherwise stated.</p> <p><u>Reference to drawings and details:</u></p> <p>Where drawings and/ or details have been referred to Tenderers should price for complete detail and specification on such details and/ or drawing. No claims relating to the omissions on the part of tenders will be entertained.</p> <p><u>Descriptions of bolts, anchors, etc.:</u></p> <p>Unless otherwise described, descriptions of items shall be deemed to include for fixing to brickwork or concrete.</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 2 BUILDING WORKS Bill No. 10 STRUCTURAL STEELWORK</p>			<p style="text-align: right;">R</p>

Where item are described as "bolted", the bolts are measured elsewhere.

Descriptions of bolts shall be deemed to include nuts and washers.

Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.

Items described as 'holed for bolt(s)' shall be deemed to exclude the bolts unless otherwise described.

STEEL TRUSSES

Welded double pitched symmetrical steel roof trusses 21755 mm wide x 3560mm high overall, formed of angle rafters, tie beams, rails, struts, braces, cleats, etc and flat bearer, gusset and connection plates, bolted to steel

1	80 x 80 x 6mm L - section	t	7.77
2	60 x 60 x 4mm L - section knee bracing	t	0.99

STEEL PURLINS, GIRTS, BRACING, ETC

Purlins and girts, bolted to steel

3	175 x 50 x 20 x 2.5mm Thick cold- formed lipped channel purlins on single lengths exceeding 44mm and not exceeding 45 mm long, including holes and bolting to cleats	t	4.59
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Welded bracing, anti-sag rails, etc with flat connection plates, bolted to steel

4	60 x 60 x 6mm Angle bracing	t	0.21
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CONCRETE

30MPa non shrink grout

5	Bedding 50mm thick under 270 x 270mm base plate	m2	22
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BOLTS, FASTENERS, ETC

6	16mm Diameter chemical anchor	No	88
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STRUCTURAL STEELWORK

PAINTING

One coat Epiwash Strontium Chromate Primer (AW 255), two coats Plascothane 9000 Polyutherane Acrylic (PRU 9000) Base & PRH 9 curing agent

7	On structural steel lattice columns, beams, trusses, etc	m2	353
8	On steel purlins, girts, etc	m2	451
<u>Intumescent paint:</u>			
9	Apply FR120 intumescent paint to structural steel work.	m2	804

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STRUCTURAL STEELWORK

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STRUCTURAL STEELWORK

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STRUCTURAL STEELWORK

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 11</u></p> <p><u>METALWORK</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Descriptions</p> <p>Descriptions of bolts shall be deemed to include nuts and washers.</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <p>Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described.</p> <p>NOTE: All steel will be galvanised unless otherwise stated.</p> <p><u>Reference to drawings and details:</u></p> <p>Where drawings and/ or details have been referred to Tenderers should price for complete detail and specification on such details and/ or drawing. No claims relating to the omissions on the part of tenders will be entertained.</p> <p><u>Descriptions of bolts, anchors, etc.:</u></p> <p>Unless otherwise described, descriptions of items shall be deemed to include for fixing to brickwork or concrete.</p> <p>Where item are described as "bolted", the bolts are measured elsewhere.</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 2 BUILDING WORKS Bill No. 11 METALWORK</p>			
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Descriptions of bolts shall be deemed to include nuts and washers.

Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.

Items described as 'holed for bolt(s)' shall be deemed to exclude the bolts unless otherwise described.

Fixing:

Items described as 'plugged' shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres.

Doors and windows shall comply with AAAMSA design criteria. Glazing shall comply with SAGGA regulations. Glass shall be laminated performance glass as shown on the window schedules appended to these bills of quantities (as described in the headings to window descriptions). Glass thickness shall comply with SAGGA regulations irrespective of thickness shown on the schedules. Doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed. For purpose made windows and doors, refer to drawings annexed to these bills of quantities.

The following certificates shall be provided prior to commencement of site work:

1. A copy of the relevant AAAMSA Performance Test Certificate from the manufacturer/contractor supplying the architectural aluminium product.
2. A Certificate of Conformance confirming that anodising or powder coating has been processed in accordance with SANS 999 and SANS 1796 respectively.
3. A powder guarantee of not less than 15 years issued by the powder manufacturer. The specific conditions contained in this guarantee shall form part of the powder coating process.

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4. A Certificate of Conformance confirming that glazing has been installed in accordance with SANS 0137, ensuring that safety glazing materials have been installed in the mandatory areas and that each individual pane of safety glazing materials has been permanently marked.

5. A warranty from the manufacturer of the laminated safety glass and/or hermetically sealed glazing units guaranteeing the products against delamination and colour degradation for a period of not less than five years.

STEEL DOOR FRAMES

1,6mm Rebated frames suitable for one brick walls with two 100 x 75mm ball bearing stainless steel butt hinges per door leaf:

1	Frame for door (D5) 914 x 2125mm high.	No	33
2	Frame for door (D8) 900 x 2100mm high.	No	2
3	Frame for door (D9) 850 x 2125mm high.	No	8
4	Frame for door (D10) 1910 x 2100mm high.	No	1
5	Frame for door (D11) 867 x 2125mm high.	No	5
6	Frame for door (D12) 1050 x 2125mm high.	No	6
7	Frame for door (D13) 967 x 2125mm high.	No	1
<u>1,6mm Mild steel plate frame to manufacturer's detail:</u>			
8	Frame for door (D4) 1609 x 2125mm high.	No	1
9	Frame for door (D5) 914 x 2125mm high.	No	85

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METALWORK

10	Frame for door (D9) 850 x 2125mm high.	No	34
11	Frame for door (D10) 914 x 2125mm high.	No	1
12	Frame for door (D11) 685 x 2125mm high.	No	6
13	Frame for door (D12) 1050 x 2125mm high.	No	3
14	Frame for door (D34) 700 x 2125mm high.	No	5

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STEEL WINDOWS, DOORS, ETC.

Cottage section standard steel windows with 20 x 4mm mild steel flat bars welded to frame:

15	Window type W-1 (Top hung) size 533 x 654mm high.	No	70
16	Window type W-1 LH (Low hung) size 533 x 654mm high.	No	2
17	Window type W-2 LH (Low hung) size 1143 x 854mm high.	No	176
18	Window type W-2 (Top hung) size 1143 x 854mm high.	No	24
19	Window type W-3 (Top and low hung) size 2642 x 1641mm high.	No	73
20	Window type W-6 (Top hung) size 889 x 854mm high.	No	2
21	Window type W-7 (Top hung) size 1022 x 654mm high.	No	48
22	Window type W-7 LH (Low hung) size 1022 x 654mm high.	No	18
23	Window type W-8 (Top hung) size 1143 x 457mm high.	No	1
24	Window type W-9 (Low hung) size 1143 x 457mm high.	No	6
25	Window type W-10 (Top and low hung) size 1616 x 1911mm high.	No	17
26	Window type W-11 (Top hung) size 889 x 457mm high.	No	25

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	<u>Cottage section mild steel windows with 20 x 4mm mild steel flat bar welded to frame:</u>				
27	Window type W-1 size 533 x 654mm high.	No	43		
28	Window type W-2 size 1143 x 854mm high.	No	42		
29	Window type W-3 size 2667 x 1645mm high.	No	10		
30	Window type W-4 size 1022 x 648mm high.	No	4		
31	Window type W-5 size 1302 x 2378mm high.	No	15		
32	Window type W-7 size 1022 x 654mm high	No	1		
33	Window type W-8 (Top hung) size 1143 x 457mm high.	No	1		
	<u>Mild steel windows with plate profile welded on all 4 corners with mild steel flat mesh welded to the inside frame as per manufacturers design:</u>				
34	Window type W-1 size 533 x 654mm high.	No	10		
35	Window type W-3, size 2591 x 2591mm high.	No	1		
36	Window type W4-L, size 648 x 648mm high.	No	46		
	<u>Mild steel windows with fixed bulletproof glazing to specialist detail. All to comply with standards:</u>				
37	Window type W23 size 915 x 1000mm high.	No	1		
	<u>Steel door with hardboard both sides and 475 x 500mm georgian glass panel with signage in basic colour signal red "FIRE" (CODE A11):</u>				
38	Door type D-9, size 850 x 2125mm high.	No	3		
39	Door type D-11, size 705 x 2125mm high.	No	7		
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	<u>Chrome finish door stopper bolted to floor:</u>				
40	Door stoppers.	No	403		
	<u>SCREENING TO WELDED STEEL</u>				
	<u>Mild steel flat mesh:</u>				
41	8 x 0.5mm mild steel flat mesh welded to the inside of window frame.	m2	26		
	<u>ALUMINIUM DOORS</u>				
	All doors to be approved by the Architect prior to installation.				
	<u>Note:</u> Tenderers are referred to architect's drawings indicating the general door layout as annexed to these bills of quantities for tender purposes.				
	<u>All aluminium units to comply with AAAMSA standards and to Architects approval:</u>				
	<u>Natural anodized aluminium doors, factory glazed with 6mm toughened clear float safety glass on 3 reflex hinges with bush on either LHS or RHS with fixed side panels in accordance with manufacturers instructions:</u>				
42	Purpose made aluminium single swing door (D1) or similar approved fixed to polyster powder coated frame size 3200 x 2125mm high overall to manufacturers specification, all as indicated on Architect's door schedule attached to these bills of quantities.	No	3		
43	Purpose made aluminium single swing door (D2) or similar approved fixed to polyster powder coated frame size 1800 x 2125mm high overall to manufacturers specification, all as indicated on Architect's door schedule attached to these bills of quantities.	No	2		
44	Purpose made aluminium single swing door (D3) or similar approved fixed to polyster powder coated frame size 1800 x 2125mm high overall to manufacturers specification, all as indicated on Architect's door schedule attached to these bills of quantities.	No	10		
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45	Purpose made aluminium single swing door (D6) or similar approved fixed to polyster powder coated frame size 831 x 2125mm high overall to manufacturers specification, all as indicated on Architect's door schedule attached to these bills of quantities.	No	6		
46	Purpose made aluminium single swing door (D13) or similar approved fixed to polyster powder coated frame size 900 x 2125mm high overall to manufacturers specification, all as indicated on Architect's door schedule attached to these bills of quantities.	No	5		
<u>STEEL STRONGROOM DOORS, VENTILATORS, ETC.</u>					
<u>Strongroom doors etc. suitable for 230mm walls fixed to brickwork:</u>					
47	DS1 Right hand record room door and frame (D7) with 7-lever security keylock to suit opening size 760 x 1883mm high including setting up, building in and caulking all around, as per Architect's door schedule attached to these Bills of Quantities	No	4		
48	Double ended strongroom ventilator size 255 x 255mm with telescopic sleeve, gauze and baffle plates, drop shutter, etc including setting up, building in and caulking all around in 1.1 cement mortar (Provisional).	No	8		
<u>STEEL ROLLER SHUTTERS ETC.</u>					
<u>Galvanized chain operated industrial roller shutter door with 75mm slats as per Architect's drawing:</u>					
49	Roll-up galvanised steel chain operated 75 x 0.8mm endlocked slatted curtain roller shutter to fit opening size (1830 x 2125mm) with overhead box 457mm high including canopy cover, standard bottom rail, 75mm wide guides, extruded aluminium T-bar with rubber seal, hot dip galvanised ancillary components including 4,5mm thick end plates, guide rails, centre lock, fixed to brick jambs and concrete lintel. Colour to Architect's approval.	No	9		
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50	<p>Roll-up galvanised steel chain operated 75 x 0.8mm endlocked slatted curtain roller shutter to fit opening size (2049 x 2125mm) with overhead box 457mm high including canopy cover, standard bottom rail, 75mm wide guides, extruded aluminium T-bar with rubber seal, hot dip galvanised ancillary components including 4,5mm thick end plates, guide rails, centre lock, fixed to brick jambs and concrete lintel. Colour to Architect's approval.</p>	No	1		
<p><u>SECURITY GATES</u></p>					
<p><u>Galvanised steel security gates:</u></p>					
<p><u>Note: The contractor is to check on site measurements before placing of order.</u></p>					
51	<p>Entrance single gate (G1) size 914 x 2125mm high overall formed of 50 x 50mm angle steel framing to detail, with NO.1 12mm heavy duty barrel bolt self lock set (to take padlock) with master keyed cylinder lock and hook, including finishing with epoxy coating in standard colours to Architect's specification, all as indicated on Architect's gate schedule, attached to these bills of quantities.</p>	No	64		
52	<p>Entrance single gate (G2) size 813 x 2125mm high overall formed of 50 x 50mm angle steel framing to detail, with NO.1 12mm heavy duty barrel bolt self lock set (to take padlock) with master keyed cylinder lock and hook, including finishing with epoxy coating in standard colours to Architect's specification all as indicated on Architect's gate schedule, attached to these bills of quantities.</p>	No	10		
<p><u>SHELVING</u></p>					
<p><u>Cold rolled sheet shelving:</u></p>					
53	<p>300mm Wide x 1.6mm thick cold rolled sheet shelving all as indicated on Architect's drawing No. GC2202_Thabotona PS_JB_02, annexed to these bills of quantities.</p>	m	1 303		
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<p><u>Approved standard white powder coated finish shelving, etc. fixed in position strictly in accordance with the manufacturer's specification:</u></p>					
54	1500mm High double slot wall band fixed to wall with 8 x 80mm 'Hilti' drive anchors.	No	539		
55	381mm Wide or equally approved by manufacturer sloping shelf bracket, colour - white.	No	2 156		
<p><u>STEEL BALUSTRADING</u></p>					
<p><u>Welded balustrading to walkways and stairs:</u></p>					
56	Raking balustrading to staircase or ramp 1000mm high, 50.8mm external diameter x 1.5mm thick continuous steel tubing handrail, 12.7 x 1.5mm steel filler tubes at approximately 96mm centres and 38.1mm steel vertical balusters at 910mm centres with 65 x 90mm base plate welded top and bottom. (Drawing No GC2202_Thabotona PS_A_PD01).	m	250		
57	Extra over for junction of end of horizontal with end of raking balustrades.	No	32		
58	35mm Expansion anchor with loose bolt.	No	48		
59	M10 x 100mm Chemical anchor with loose bolt.	No	48		
<p><u>STEEL SPIKES</u></p>					
<p><u>Wall spikes to Architect's Drawing No: GC2202 Thabotona PS BK3:</u></p>					
60	On walls.	m	43		
<p><u>GALVANISED STEEL MINOR WORK</u></p>					
<p><u>Columns, comprising channels welded to form box sections:</u></p>					
61	100 x 100 x 3mm Mild steel square tube columns in 2410mm lengths.	No	8		
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62	127 x 127 x 12.7mm thick Mild steel HSS column 5 720mm high, bolted to strip footing at 2700mm centres around court yard area.	No	42		
63	102 x 102mm SHS column to support windows in accordance with Engineer's detail and specification.	No	6		
	<u>Mild steel beams:</u>				
64	50 x 200mm Mild steel lipped channel beam.	m	36		
	<u>Galvanised Mild Steel:</u>				
65	9000mm High flagpole formed of 87mm (87mm for 5000mm, then reduces to 80mm for 4000mm) diameter steel pole, with pole cap and rope ring, eye, pulley, cleat and hinge stand, bolted with 3 x 12 mm diameter stainless steel threaded rod and bolts to and including 2 steel support channels 125 x 75 x 20 x 3 x 2000mm long welded to 80 x 80 x 6mm angle fixing cleats, each securely fixed to concrete base with 2 x 16mm diameter steel rods 600mm long embedded 600mm deep in ground, or equal approved, in and including 800 x 800 x 800mm deep cement concrete (25 MPa/19 mm stone) base including all excavation in earth, backfilling and ramming etc. complete.	No	2		
66	19 x 235 x 4200mm Long galvanised steel fascia boards.	m	1 353		
67	80 x 275 x 6mm Galvanised steel barge boards, including 12 x 40mm countersunk brass screws with galvanised steel H-profile barge board joiners.	m	129		
	<u>Sundries:</u>				
68	1800 x 1200mm Corporate digitally printed flag onto Ultra sheen including rope and toggle and including all branding, courier to client, artwork, redrawing etc. with School Logo.	No	2		
69	1800 x 1200mm Corporate digitally printed flag onto Ultra sheen including rope and toggle and including all branding, courier to client, artwork, redrawing etc. South African national flag.	No	2		
	<u>EXPANDED METAL SHEET</u>				
70	VEM320G or Equally Approved expanded metal sheet fixed to top of rafter to form under roof sheeting	m2	6 738		
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Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 12</u></p> <p><u>PLASTERING</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Moisture tests:</u></p> <p>Before any finishes, coverings, etc. are applied to screeds, plastering, etc. or any other in-situ finish moisture tests are to be carried out to the complete satisfaction of the Principal Agent to ensure that these surfaces have the correct moisture content for the finish to be applied.</p> <p><u>Labours, etc.:</u></p> <p>Labours such as fair, rounded and chamfered edges, trowel cuts, throats, V-joints, angles, etc. shall be deemed to be included in the descriptions.</p> <p><u>Granolithic:</u></p> <p>Coloured granolithic shall be tinted with an approved colouring pigment mixed into a true and even colour.</p> <p>Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying.</p> <p>Granolithic shall be laid in panels not exceeding 14m² for monolithic finishes, not exceeding 9,5m² for bonded finishes and not exceeding 6m² for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1,5 times its width.</p>			
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Unless otherwise described, granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SANS 1083 and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the size of the coarse aggregate shall be increased to the maximum size compatible with the thickness of the granolithic.

For granolithic applied monolithically, the concrete floor shall be swept clean after bleeding of the concrete has ceased and the slab has begun to stiffen; any remaining bleed water shall be removed and the granolithic applied immediately thereafter. For granolithic to be bonded to the floor slab after it has hardened, the slab surface shall be hacked (preferably by mechanical means) until all dirt, oil, etc. is dislodged and swept clean of all loose matter. The slab shall then be wetted and kept damp for at least six hours before applying the granolithic.

Where possible joints between panels shall be positioned over joints in the floor slab and shall be at least 3mm wide through the full thickness of the finish, separated by strips of wood or fibreboard and finished with V-joints.

Cement plaster:

Unless otherwise described, cement plaster shall be taken to mean Class 1 cement plaster.

Self - levelling screed:

To Contractor's expense should Class 1 variance in F1 above not be achieved. Grind & prime existing surface with self-levelling Tal-Screed Master or equal & approved - thickness between 4 to 5mm.

SCREEDS

3:1 Cement screed on concrete:

1	30mm Thick screed on floors and landings power floated on concrete.	m2	13 698
2	35mm Thick screed on floors and landings power floated on concrete.	m2	273

GRANOLITHIC

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	<p><u>BILL NO. 13</u></p> <p><u>TILING</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Fixing:</u></p> <p>Unless described as 'fixed with adhesive to plaster (plaster elsewhere)' descriptions of tiling on brick or concrete walls, columns, etc. shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc. shall be deemed to include 1:3 plaster bedding.</p> <p>Tiling described as "fixed with adhesive on power floated concrete" shall be deemed to include for approved tiling key - coat.</p> <p>Ceramic, tiles are to be fixed and grouted with suitable adhesives and grouts from the Professional range of products as recommended by the manufacturer of the tiles.</p> <p><u>WALL TILING</u></p> <p><u>152 x 152 x 5mm Thick white glazed ceramic tiles fixed to plaster (elsewhere measured) with and approved tile adhesive to and pointed with white cement to:</u></p>			
1	Walls in splashbacks.	m2	29	
2	Walls	m2	1 745	
3	On narrow widths.	m2	123	
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FLOOR TILING

Allow The Prime Cost of R450/M2 for 500 x 500mm anti-slip porcelain tiles delivered to site including waste, labour, adhesive, grouting with continuous joints in both directions and profit, etc.

4	On floors	m2	1 094
5	Skirting 150mm high.	m	1 075

Allow The Prime Cost of R700/M2 for 500 x 500mm heavy traffic porcelain tiles delivered to site including waste, labour, adhesive, grouting with continuous joints in both directions and profit, etc.

6	On floors	m2	342
7	Skirting 150mm high.	m	372

120 x 330mm Glossy ceramic tiles with aluminium coping:

8	On floors.	m2	67
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SUNDRIES

Aluminium dividing strips, etc.:

9	40mm Aluminium transition strip embedded into screed between vinyl sheeting and porcelain floor tiles.	m	204
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Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 14</u></p> <p><u>PLUMBING AND DRAINAGE (PROVISIONAL)</u></p> <p><u>PREAMBLES</u></p> <p>Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior approval by the Principal Agent.</p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>References to details and drawings:</u></p> <p>Where drawings and/ or details have been referred to Tenderers should price for complete detail and specification on such details and/ or drawing. No claims relating to the omissions on the part of tenders will be entertained.</p> <p><u>Wire gratings:</u></p> <p>Descriptions of gutter outlets etc. shall be deemed to include wire balloon gratings.</p> <p><u>Stormwater channels:</u></p> <p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc., and disposal of surplus material on site.</p>			
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French drains:

Descriptions of French drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, approved geo-fabric filter blanket over stone, 300mm earth filling over and disposal of surplus material on site.

Stainless steel basins, sinks, wash troughs, urinals, etc.:

Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0) Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc. shall be Type 304 (18/8) Stainless steel for laboratory sinks, photographic equipment, etc. shall be Type 316 (18/8) Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.

Sealing of edges:

Outer edges of sinks, basins, baths, urinals, etc. are to be sealed against adjacent surfaces with approved silicone.

uPVC pipes and fittings:

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings.

uPVC pressure pipes and fittings:

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.

High density polyethylene (HDPE) pipes and fittings:

Pipes shall be type IV and of the class specified with Plasson or Alprene compression fittings.

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Polycop polypropylene pipes:

Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with Fast-fuse heat welded thermoplastic or where so described Polylock compression fittings Pipes shall be firmly fixed to walls, etc. with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.

Copper pipes:

Pipes shall be hard drawn and half-hard Maksal pipes of the class described. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), Class 2 (half-hard) and Class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be Cobra Watertech type. Capillary solder fittings shall comply with ISO 2016.

Copper pipes are to be installed in accordance with the latest revision of the Code of Practice for Copper Plumbing soldering techniques. Flux, solder, etc. to be strictly in accordance with the manufacturer's requirements with special attention to copper flux composition.

Reducing fittings:

Where fittings have reducing ends or branches they are described as 'reducing' and only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained.

Fixing of pipes:

Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc., casting in, building in or suspending not exceeding 1m below suspension level.

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Paper wrapping to pipes:

Pipes chased into brickwork must be wrapped with two layers of stout brown paper tied with wire. Rates are to include for wrapping around joints and fittings.

Disinfection of water pipework:

Water pipework is to be disinfected at completion in accordance with SABS 1200L (provision for disinfection elsewhere).

Laying, backfilling, bedding, etc. of pipes:

Pipes shall be laid and bedded in accordance with manufacturers' instructions and trenches shall be carefully backfilled.

Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following: SABS 1200L : Medium-pressure pipelines SABS 1200LD : Sewers SABS 1200LE : Stormwater drainage Pipe trenches, etc. shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB : Earthworks (Pipe trenches) Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB : Bedding (Pipes) Unless otherwise described bedding of rigid pipes shall be Class B bedding.

General:

Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc. are given separately) Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends.

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc. shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 93% Mod AASHTO density and disposal of surplus material on site.

Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc. and to steel pipes (adaptors for connections to copper pipes, etc. are given separately).

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Descriptions of WC pans, slop hoppers, etc. shall be deemed to include for joints to soil pipes (pan connectors are separately measured).

As-built drawings:

Where required, the contractor shall prepare an updated set of as-built drawings. At completion of the contract the contractor shall hand these drawings to the principal agent for reproducing onto the originals for handing over to the employer (provision for allowance of as-built drawings elsewhere).

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RAINWATER DISPOSAL

Watertite seamless aluminium guttering (or similar approved) 150mm x 125mm industrial OGEE x 0,8mm - ColourTech G4 in colour Charcoal including cut and mitred angles covered with a mitre strip externally, stop ends riveted and all sealed on the inside with Dow Corning 813 silicone sealer, secured to fibre cement fascia with 20 x 3mm dual-purpose brackets at 600mm centres using aluminium peeled rivets, with 75 x 50mm aluminium downpipe connected to water tanks to detail, to include all necessary bends, elbows, shoes etc.

1	125 x 125mm eaves gutter	m	1 353
2	125 x 125mm eaves gutter stopped end	No	40
3	125 x 125mm eaves gutter mitre corner	No	56
4	100 x 75mm eaves gutter outlet	No	122
5	100 x 75mm fluted rainwater pipe	m	494
6	100 x 75mm crimped rainwater pipe bend	No	122
7	100 x 75mm crimped rainwater pipe shoe	No	122

SANITARY FITTINGS AND GEYSERS

Supply and fix the following sanitary fittings, geysers and equipment together with loose ancillary fittings supplied therewith, including unloading, storing, unpacking, hoisting or lowering as required, fixing and building into position, cutting all mortices and chases as required for fixing and building in position, cutting, brackets, clamps, etc., and connecting up pipework and handing over in perfect working order at completion:

8	15mm brushed chrome plated power vandal-resistant shower head with self-cleaning spray nozzle	No	23
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<u>Wash Hand Basins:</u>				
9	510mm x 430mm Vaal sanitary ware or Equally Approved hibiscus vitreous enamel wash hand basin including securely fixing to wall with bolts and fixing to floor with a pedestal.	No	92	
10	Approved white C.I Porcelain wall hung enamelled basin, 31mm chromium plated outlet, with plug, chain, anchor and 32mm back nut.	No	3	
11	Acrylic WHB integrated into double/triple acrylic vanity.	No	5	
12	Drop in epoxy single lab sink.	No	30	
<u>Precast Concrete Basin</u>				
13	Precast concrete basin size 605 x 410 x 130mm high.	No	2	
<u>Water Closet:</u>				
14	Junior vitreous china low level suite colour white with junior double flap wooden seat, comprising 104 degree outlet washdown pan with matching 6 litre front single flush cistern including lid, figments and flushpipe	No	22	
15	Paraplegic vitreous china floor mounted paraplegic wash down suite colour white comprising semi close couple 90 degree outlet open rim wash down pan and matching 9 litre cistern, including lid, fitments and purpose-made chromium plated side flush lever.	No	8	
16	Hibiscus vitreous china closet close coupled wash down suite colour white, comprising 90 degree outlet open rim panand matching 6/3 litre top dual flush cistern including lid and fitments, without seat	No	79	
17	Standard white Porcelain WC, with low pressure flush master valve, complete with lid fitments, flushing system and white timber gloss coated single flap seat.	No	81	
18	Vitreous china floor mounted paraplegic washdown suite colour white (code 7300SC) including semi close couple 90° outlet open rim washdown pan and matching 9 litre cistern complete with lid, fitments and purpose-made chromium plated side flush lever.	No	10	
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<u>Grade 304 (18/10) stainless steel fittings:</u>				
19	Grade 304 0.7mm thick stainless steel type E single bowl wash trough size 540 x 455 x 285mm deep with lugs built into wall cobra watertech ledimo 15mm chrome plated wall mounted sink mixer with overarm swivel outlet, adjustable wall flanges and concealed connections, manufactured in accordance with SANS 226:2004	No	1	
20	Grade 304 18/10 polished stainless steel centre double bowl drop on sink size 1200 x 535mm wide with two 343 x 410 x 169mm deep bowls, fitted onto cupboard.	No	4	
21	"Franke Rondo 360 - Inset" or equally approved vanity basins, size 360mm diameter x 340mm deep x 158mm deep with 12.5mm gauge. Unit is Grade 304 (18/10) stainless steel with a 40mm waste outlet and overflow hole. Basin to be fitted as an inset or undermount to vanity counter (e/m) and sealed with polysulphide sealant (e/m).	No	33	
22	White vitreous china wall urinal size 610 x 385mm with wall hangers, strainer waste, top inlet spreader and chrome, fixed to wall and connect up to waste and water piping.	No	19	
23	Franke SS slop hopper with SS grid & 100mm Splash back 2630035 Franke CH slophopper 540 x 540 manufactured from grade 304 (18/10) stainless steel 1,2mm thick with a 100mm high integral splash to the rear and both sides.	No	1	
<u>Vitreous china:</u>				
24	Vitreous china wall mounted basin colour white, size 455 x 290mm with two tapholes, including integrated overflow and chainstay hole bolted to wall with two 10mm bolts and sealed with silicone sealant where basin meets wall with 15mm chrome plated pillar tap with aerator outlet and flanged backnut, manufactured in accordance with SANS 226;2004 TYPE 1.	No	105	
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25	Lavatera white vitreous china wall mounted top inlet urinal, size 600 x 385 X 380mm, including 38mm chromium plated domical grating and chromium plated top inlet spreader, flush valve, fixed on and including two hanger brackets and urinal division fixed with and including fixing screws and hanger bracket.	No	34		
26	Laboratory sink (Code 234500) or similar approved, size 435mm x 335mm x 180mm with acid resistant waste code 8790Z0, two underslung brackets code 8109Z0 and fitted into opening in joinery fitting with silicone sealant (joinery fitting elsewhere measured).	No	12		
<u>ELECTRIC WATER HEATERS</u>					
<u>'Kwikot' or other equal approved:</u>					
27	250 Litre horizontal floor mounted type electric hot water copper cylinder complete with vacuum breakers, pressure reducing valve and relief valve including all joints to copper pipes and hoisting into position in roof space and placing on platform (elsewhere measured) and connect up.	No	1		
<u>TAPS, VALVES, ETC.</u>					
<u>Pillar taps:</u>					
28	Medical mixer tap with elbow action for easy use with temperature Red/Blue indice for hot/cold water application chrome plated pure shine protects the product from scratches and leaves them resistant to dirt and easy to maintain. 63mm high x 41mm diameter.	No	12		
29	15mm chrome plated pillar tap with aerator outlet and flanged back nut manufactured in accordance with SANS 226:2004 type.	No	65		
30	15mm chrome plated wall mounted sink mixer Tap with overarm swivel outlet, adjustable wall flangers and concealed connections manufactured in accordance with SANS 226:2004	No	4		
31	15mm chrome plated FI X FI under tile stop tap, manufactured in accordance with SANS 1480:2005 (BS 5412)	No	17		
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32	Cobra Capstan: CS-294CP or Equally Approved one hole basin mixer with cast fixed outlet. ½" BSP female inlets. SANS 226 TYPE 2.	No	94		
33	Cobra or Equally Approved wall type sink mixer with aerated swivel outlet. ½" BSP male inlet. SANS 226 TYPE 2. Ledimo: LO- 266/041/10	No	18		
	<u>Lab Taps</u>				
34	Bench mounted cold water lab tap single outlet.	No	19		
35	Dry service lab gas mounted on bench single outlet	No	41		
	<u>WASTE UNIONS, TRAPS, ETC.</u>				
	<u>Traps etc.</u>				
36	38mm waste fitting and PVC trap.	No	3		
37	40mm Chrome plated deep seal bottle trap with outlet for 50mm PVC (code 365/50), or similar approved.	No	112		
38	40 x 40mm rubber deep seal 'P' or 'S' trap jointed to waste outlet fitting and to PVC pipe including coupling clamps, etc.	No	112		
	<u>Waste unions etc.</u>				
39	40mm Chromium plated '316CP' sink waste union complete with plug and chain, or similar approved.	No	42		
	<u>Floor drains, etc.</u>				
40	HB 200 V (H) NW 100' or other equal approved stainless steel grade 304 or other equal approved floor drain with vertical bottom outlet size 240mm x 240mm x 210mm deep fitted and connected complete.	No	2		
	<u>COVERS, ETC.</u>				
	<u>Gratings, covers, etc.</u>				
41	450 x 450mm Cast iron rain drain grate and housing with spigot to fit 110mm drain pipe.	No	2		
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PLUMBING AND DRAINAGE (PROVISIONAL)

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	<u>BILL NO. 15</u>			
	<u>GLAZING</u>			
	<u>PREAMBLES</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Float glass:</u>			
	The term 'float glass' is used for monolithic annealed glass.			
	<u>GLAZING TO STEEL WITH PUTTY</u>			
	<u>6mm Frosted/obscured glass:</u>			
1	Panes exceeding 0,1m ² and not exceeding 0,5m ² .	m2	611	
	<u>6mm Clear float safety glass:</u>			
2	Panes exceeding 0,1m ² and not exceeding 0,5m ² .	m2	2	
	<u>4mm toughened safety glass:</u>			
3	Panes exceeding 0,1m ² and not exceeding 0,5m ² .	m2	249	
	<u>GLAZING TO ALUMINIUM WITH CLIP ON BEADS</u>			
	<u>6mm toughened safety glass:</u>			
4	Panes exceeding 2m ² and not exceeding 4m ² .	m2	639	
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FIXED BULLETPROOF GLAZING

42mm Fixed bulletproof glazing for protection against 357 and 44 magnum big hand guns and small calibre rifles to specialist detail. All to comply with standards

5	Panes exceeding 0,5m ² and not exceeding 2m ²	m2	6	
---	---------------------------------------------------------------------	----	---	--

TOPS, SHELVES, DOORS, MIRRORS, ETC.

6mm 'GG' quality polished glass mirrors with polished edges holed for and fixed with round nose chromium plated mirror screws with rubber buffers to plugs in brickwork or concrete:

6	Mirror 450 x 600 x 6mm thick fixed at 800mm above finished floor level.	No	6	
---	-------------------------------------------------------------------------	----	---	--

Grade 304 1mm 18/10 stainless steel mirrors:

7	Mirrors, size 500 x 600 x 1mm deep plugged and screwed to the wall with stainless steel screws.	No	107	
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Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 16</u></p> <p><u>PAINTWORK</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Painting specification:</u></p> <p>All painting shall be done in accordance with SABS specifications unless otherwise described.</p> <p><u>Colours:</u></p> <p>Unless otherwise described, all paintwork shall be deemed to have a colour value in excess of 7 on the Munsell system in accordance with SABS 1091.</p> <p>When staining timber, the resultant colour or shade must be to the complete satisfaction of the Principal Agent before any overcoating or preservative is applied.</p> <p><u>ON FLOATED PLASTER SURFACES</u></p> <p><u>Prepare surfaces and remove all loose material, apply one coat alkaline resistant primer, one universal undercoat two coats eggshell enamel paint on:</u></p>			
1	On walls.	m2	6 466	
2	In narrow widths.	m2	343	
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<u>ON BRICK SURFACES</u>					
<u>Clean down with spirits of salts solution and apply two coats silicone-based brick dressing on:</u>					
3	Facings (Internally).	m2	2 255		
4	Facings (Externally).	m2	672		
<u>ON METAL</u>					
<u>Prepare, clean standard steel surfaces and apply one coat approved primer and two finishing coats of enamel paint on:</u>					
5	Burglar gates and frame (measured flat on both sides).	m2	535		
<u>Prepare, clean standard steel surfaces and apply two coats approved primer and two finishing coats of enamel paint on:</u>					
6	Burglar gates and frame (measured flat on both sides).	m2	414		
<u>Prepare, clean mild steel surfaces and apply two coats anti-corrosive paint and two finishing coats of enamel paint to Architect's choice on:</u>					
7	100 x 100mm Mild steel square tube columns.	m2	8		
<u>Sand down and apply one coat zinc chromate primer, one coat universal undercoat and two finishing coats approved gloss enamel paint in approved colour on:</u>					
8	Mild steel door frames.	m2	309		
<u>Epoxy coating in standard colours to Architect's specification:</u>					
9	Security gates (measured flat on both sides).	m2	137		
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	<u>Prepare and apply one coat universal undercoat and two finishing coats enamel paint to approval and manufacturer's detail:</u>				
10	Mild steel door frames.	m2	354		
	<u>Prepare and apply one coat primer coat and two finishing coats enamel paint to approval and manufacturer's detail:</u>				
11	Windows (measured flat on both sides)	m2	1 510		
	<u>ON WOOD</u>				
	<u>Sand down, prepare and apply two coats clear eggshell polyurethane varnish on:</u>				
12	Skirtings and quadrant bead, rails, etc., not exceeding 300 mm girth.	m	4 165		
	<u>Prepare and apply one coat spik and span all based wood primer UC2, two finishing coats of velvagio polyurethane enamel VLO on:</u>				
13	Doors (all surfaces measured).	m2	854		
	<u>Three coats approved varnish on:</u>				
14	Doors (all surfaces measured).	m2	192		
	<u>ON FIBRE-CEMENT, PLASTERBOARD, ETC.</u>				
	<u>Prepare and apply one coat zinc chromate to nail heads and H-spline strips, one universal undercoat and apply two finishing coats of eggshell enamel on:</u>				
15	General surfaces of skimmed ceilings.	m2	1 456		
16	General surfaces of fibre cement ceilings.	m2	2 056		
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5	25mm ² 4 Core PVC insulated copper cable (From DB-MAIN to DB-EP,DB-D1 & 2, DB-C1 & 2)	m	900		
6	16mm ² 4 Core PVC insulated copper cable (Supply cables to DB-L2, C3, C4, D3, D4, I, B and DB-L3)	m	700		
7	16mm ² 3 Core PVC insulated copper cable (Supply cables to DB-J, L4, K & O)	m	250		
	<u>Supply and install bare copper earth conductor</u>				
8	35mm ² Bare copper earth cable	m	100		
9	16mm ² Bare copper earth cable	m	1 060		
10	10mm ² Bare copper earth cable	m	950		
11	6mm ² Bare copper earth cable	m	250		
	<u>GLANDS AND SHROUDS</u>				
12	70mm ² 4 x Core PVC insulated copper cable	m	4		
13	35mm ² 4 Core PVC insulated copper cable	No	2		
14	25mm ² 4 Core PVC insulated copper cable	No	10		
15	16mm ² 4 Core PVC insulated copper cable	No	16		
16	16mm ² 3 Core PVC insulated copper cable	No	8		
	<u>GLANDS AND SHROUDS (Earth bare)</u>				
17	35mm ² Bare copper earth cable	No	4		
18	16mm ² Bare copper earth cable	No	12		
19	10mm ² Bare copper earth cable	No	16		
20	6mm ² Bare copper earth cable	No	8		
	<u>CABLE MARKERS & WARNING TAPES</u>				
21	Cable markers for cable routes indication	No	20		
22	Cable warning tape	m	1 000		
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<u>SUPPLY & INSTALL PVC SLEEVES</u>			
23	110mm Diameter	m	500
24	50mm Diameter	m	500
<u>TRENCHING AND EXCAVATIONS (600mm wide & 800mm deep). Rate to include bedding and backfilling</u>			
25	Pickable soil	m3	480
26	Soft rock	m3	120
27	Hard rock	m3	120
28	Install 600x600x800mm manhole (provision)	No	20
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BULK SUPPLY AND RETICULATION

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	<u>ELECTRICAL INSTALLATION</u>			
	NOTE: Tenderers are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).			
	The complete installation must comply to GDID electrical installation specifications. Therefore Tenders are advised to study the specifications and drawings before the Bill is to be price.			
	<u>CONDUITS</u>			
	<u>Supply and install pipes including short lengths jointing, sweeping bends, buses, locknuts, roundboxes etc.:</u>			
1	20mm diameter PVC pipe cast into concrete, brick work or suspended in ceiling voids	m	13 480	
2	20mm diameter copex conduit	m	1 150	
	<u>Supply and install steel galvanised walls boxes complete with all accessories</u>			
3	100mm x 50mm x 50mm deep	No	855	
4	100mm x 100mm x 50mm deep	No	1 760	
5	Supply and install 1,6mm diameter steel galvanised draw wires drawn into conduit/sleeves:	m	14 780	
6	Supply and install 100mm x 100mm blank cover plates	No	75	
7	Supply and install 4 way PVC round boxes	No	3 270	
8	Supply and install 100mm X 50 blank plates	No	75	
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ELECTRICAL CABLE MANAGEMENT & TRUNKING

Supply, Install, Test and Commission

Galvanised unistrut suspended from structure in the roof. Fixings not to exceed 4m including galvanized steel cover (Rates to include: Tees, Bends, 4 ways, ends and all other accessories).

9	P9000 Unistrut	m	2 280
10	P8000 Unistrut	m	730
11	P2000 Unistrut	m	825

Power Skirting Aluminium:(To include All: elbows, corners sections, T-sections & end caps)

12	Cabstrut N8/P803, 2-way with 2 cover plates & divider	m	535
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DISTRIBUTION BOARDS (Refer to schematic diagrams)

Supply and install main distribution board as per the schematic diagram and GDID specifications. The distribution board will be surface mounted in the duct provided. The distribution board doors must have a neat and professionally manufactured cut-out, with reinforced and properly finished edges, so that the main isolator of the distribution board can be switched without opening the door in case of emergency. . Distribution boards must lockable and padlocks must be supplied with the distribution board

13	DB-A	No	1
14	DB-B1	No	2
15	DB-EP	No	1
16	DB-C1 & C2	No	2
17	DB-C3 & C4	No	2
18	DB-D1 & D2	No	2

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19	DB-D3 & D4	No	2		
20	DB-I	No	1		
21	DB-J	No	1		
22	DB-K	No	1		
23	DB-O	No	1		
24	DB-L1	No	1		
25	DB-L2	No	1		
26	DB-L3	No	1		
27	DB-L4	No	1		
28	Supply and install master common box as per details indicated in the drawing. The common box supplied to be able to accommodate all required outlets.	No	1		
29	Supply and install slave common box as per details indicated in the drawing. The common box supplied to be able to accommodate all required outlets.	No	1		
30	Supply and install vandal proof, lockable and ventilated enclosure above stage common box. The enclosure to be able to accommodate: Rackable UPS, DMX, Amplifier, 1 x Isolator, 2 x switched socket outlets.	No	1		
<u>CONDUCTORS</u>					
<u>Supply and install 600/1000Volt PVC insulated stranded copper conductors drawn into conduits, etc. (Wiring for lighting circuits is to be carried out with 2,5mm² conductors and 2,5mm² earth conductors. For socket outlet circuits the wiring shall comprise of 4 mm² conductors with 2, 5mm² earth conductors)</u>					
31	2.5mm ²	m	30 700		
32	4mm ²	m	25 770		
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33	6mm2	m	670
	<u>Earth Wire</u>		
34	2.5mm2	m	28 235
35	4mm2	m	385

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SOCKETS OUTLETS

Supply, install and connect socket outlets in flush wall mounted boxes, power skirting, trunking or surface if required complete with cover plates and all necessary accessories:

36	Supply and install 230V, 16A combination switched socket outlets (with 1 x standard 16A round 3 pin socket + 1 x 3 pin ZA plug socket combined) flush mounted on the wall c/w steel cover plate (white) suitable to accommodate SANS 164-1 & SANS 164-2 socket outlets.	No	974
37	Supply and install 230V, 16A combination switched socket outlets (with 1 x standard 16A round 3 pin socket + 1 x 3 pin ZA plug socket combined) with weatherproof (IP44) box flush mounted on the wall c/w steel cover plate (white) suitable to accommodate SANS 164-1 & SANS 164-2 socket outlets.	No	27
38	Supply and install 230V, 16A standard round 3-pin switched socket outlets flush mounted on the power skirting c/w steel cover plate (white) suitable to accommodate SANS 164-1 socket outlets.	No	101
39	Supply and install 230V, 16A 3-pin ZA plug switched socket outlets flush mounted on the power skirting c/w steel cover plate (white) suitable to accommodate SANS 164-2 socket outlets.	No	101
40	supply and install cluster unit to accommodate 1 x 16A standard round 3-pin switched socket outlet, 16A 3-pin ZA plug switched socket outlet + 1 x RJ11 telephone outlet and RJ45 data outlet complete with covers, blank plates and all necessary accessories (to be installed in 1 tier wall box). Rates to include blank covers for RJ11 and RJ45 only as these outlets are measured under ICT	No	4
41	Supply and install 5 Amp single un-switched Socket outlet (complete with 60mm pvc round box for light fittings). The socket to be mounted on the trunking or somewhere else in the ceiling void.	No	1 375

SWITCHES

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<u>Supply, install and connect light switches in flush wall mounted boxes, complete with cover plates and all necessary accessories:</u>					
42	Supply and install 16A one lever one way light switch flush mounted on the wall	No	260		
43	Supply and install 16A two lever one way light switch flush mounted on the wall	No	17		
44	Supply and install 16A one lever two way light switch flush mounted on the wall	No	32		
45	Supply and install Day light switch/photocell	No	17		
46	Supply and install 32A master switch	No	2		
47	Supply and install 16A rotary dimmable switch unit	No	2		
48	Supply and install 16A intermediate light switch	No	3		
49	Supply and install 3 pole 30A contactor	No	2		
<u>ISOLATORS</u>					
<u>Supply, install and connect isolators in flush wall mounted boxes or surface, complete with cover plates and all necessary accessories (Isolators to be mounted within one meter of the equipment to be controlled).</u>					
50	Supply and install 230V, 30A double pole isolator surface mounted in the ceiling void for geyser connection. Rates to include 4 inch x 4 inch extension box	No	19		
51	Supply and install 230V, 60A double pole isolator flush mounted in the wall for stove or extractor fan connection	No	3		
52	Supply and install 230V, 30A double pole isolator mounted in the ceiling void for HVAC .Rates to include 4 inch x 4 inch extension box	No	2		
53	Supply and install 230V, 30A double pole isolator flush mounted in the wall for intercom control panel	No	2		
54	Supply and install 230V, 30A double pole isolator mounted in the wall for UPS connection	No	4		
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55	Supply and install 230V, 30A double pole isolator mounted in the ceiling void for siren. Rates to include 4 inch x 4 inch extension box	No	1		
56	Supply and install 230V, 30A double pole isolator mounted in the ceiling void for extractor canopy. Rates to include 4 inch x 4 inch extension box	No	5		
57	Supply and install 230V, 30A double pole isolator flush mounted in the wall for air-conditioner.	No	1		
58	Supply and install 230V, 30A double pole isolator flush mounted in the wall for stove connection.	No	3		
59	Supply and install 230V, 30A double pole isolator surface mounted in the ceiling void for compactor connection. Rates to include 4 inch x 4 inch extension box	No	5		
60	Supply and install 230V, 30A double pole isolator mounted for coldroom. Rates to include 4 inch x 4 inch extension box	No	1		
61	Supply and install 230V, 30A double pole isolator mounted in the for fire alarm panel.	No	1		
62	Supply and install 230V, 30A double pole isolator mounted in the wall for extractor canopy	No	2		
63	Supply and install 400V, 40A double pole isolator surface mounted for fresh air supply unit. Rates to include 4 inch x 4 inch extension box.	No	2		
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LUMINAIRES

Supply, install and connect luminaries complete with lamps, fixings, brass screws, washers, etc. All recessed light fittings should be supplied with 3m connection lead

64	Type A1 (1150mm long surface mounted light fitting c/w 33W LED, 5609 lumens, IP54, 4 000K, UV stabilised polycarbonate diffuser, electronic control gear)	No	179
65	Type C (Ceiling mounted 15W LED round bulkhead IP65 light fitting with prismatic acrylic diffuser)	No	464
66	Type D (Surface mounted 30W LED flood light fitting)	No	39
67	Type A6 (Recessed LED panel light fitting c/w 50W LED, 5907 lumens, IP40, UV polycarbonate diffuser, 2m x 0.75mm 2flex cable, 5A unswitched socket outlet, 5A plug top, electronic control gear and 5 year warranty)	No	467
68	Type R (Wall mounted round bulkhead IP65 c/w E27 20W red LED lamp, and electronic control gear and prismatic acrylic diffuser)	No	6
69	Type T (1200 X 600 recessed DALI dimmable T-Bay luminaire c/w 119W LED clear plastic diffuser and MIRO4 aluminium)	No	42
70	EXIT (Non-maintained emergency exit light c/w 4W LED, battery pack and electronic control gear)	No	14
71	Type T2 (Non-maintained emergency directional exit light c/w 4W LED, battery pack and electronic control gear)	No	5
72	Type G (recessed downlight c/w 10w cool LED E27 lamp holders)	No	25
73	Type H (Recessed ceiling mounted high beam 35W LED downlight tilted to 35 degrees to normal and with electronic control gear)	No	6

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74	Type F (track mountable high beam professional cylindrical LED par CAN 16 Channel DMX & sound activated stage lighting 0-100% dimmable c/w 18 x 10W 4-in-1 LED and with electronic control gear)	No	10		
<u>AUDITORIUM LIGHTING CONTROL</u>					
75	Supply and install a complete DALI lighting control system in the auditorium, the system to be able to control and dim 42 x 116W light fittings. The lights to be controlled from two different places (common boxes). The contractor to quote for a complete working system that will include 2 x DALI dimmer switches, wiring cables, sufficient channel relay units to accommodate 42 lights and all other required accessories.	No	1		
<u>TELECOMMUNICATION AND DATA</u>					
76	RJ11 cover plate on the wall or Power skirting	No	31		
77	RJ45 cover plate on wall or Power skirting	No	272		
78	450mm x 300mm x 125mmdeep telephone wall box	No	14		
<u>TESTING AND COMMISSIONING</u>					
79	Inspections, testing and handing over of the complete installation in the presence of the Engineer and certify the results on the Certificate of compliances by an accredited person.			Item	
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ELECTRICAL INSTALLATION

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	<p><u>BILL NO. 3</u></p> <p><u>EARTHING AND LIGHTNING PROTECTION</u></p> <p>NOTE: Tenderers are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).</p> <p>(a) The earthing & lightning protection installation shall be strictly as per the latest SANS Specifications, these are available from the SABS, and the onus is on the contractor to acquire his /her own copy:(b) Install SABS Approved earthrods (1,5m in length, 16mm Dia copper plated) in pre-drilled holes (55mm Dia) as per drawing. (c) Connect the earthrod via 70mm² Insulated Copper wire & wire rope clamps/u-bolts to the rebar of the column or testing points. (d) The 70mm² Insulated Copper wire must be laid in a trench 500mm in depth & the copper must be connected to the earthrod via electrothermic welding. (e) All pre-drilled holes must be backfilled with conductive cement, as per supplier's specification. (f) The roof should be bonded every 20m to the column via 35mm² Insulated Copper wire (connected to the rebar & connected to the zinc roof.</p> <p><u>LIGHTNING PROTECTION</u></p>			
1	Install 1,5m SABS Approved earthrods at a depth off 500mm below ground level	No	120	
2	70mm ² Insulated Copper wire	m	250	
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	<p>Section No. 3 ELECTRICAL INSTALLATION Bill No. 3 EARTHING AND LIGHTNING PROTECTION</p>			

3	Bond to test point as per drawing.	No	120		
4	Electrochemical /Exothermic connection	No	120		
5	Trenching in soft rock	m3	30		
6	PVC conduit 25mm diametre (flush mounted in the wall from the roof to the flush galvanised conduit box and from conduit box to the earth peg outside the building)	m	620		
7	105mm x 105 mm galvanized conduit box located 300 mm above finished floor level and fitted with blank PVC cover plates labelled "Earth Test Point".	No	120		
8	Conductive Cement	No	120		
9	Continuous 35 square mm round solid zinc coated copper strip secured to roof of building, including all clamps, joints and fixing accessories	m	850		
10	10mm2 bare copper earth wire for interconnection of earth pegs	m	1 300		
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BONDING OF WALKWAYS BETWEEN BLOCKS

Bonding of pillars next of covered walkways between school blocks (The pillars to be bonded to earth pegs and have a galvanized 105mm x 105mm test box with PVC cover), Rate

11	Install 1,5m SABS Approved earthrods at a depth off 500mm below ground level	No	28
12	70mm ² Insulated Copper wire	m	90
13	Bond to test point as per drawing.	No	28
14	Electrochemical /Exothermic connection	No	28
15	Trenching in soft rock	m3	24
16	PVC conduit 25mm diametre (from conduit box to the earth peg outside the building)	m	150
17	105mm x 105 mm galvanized conduit box located 300 mm above finished floor level and fitted with blank PVC cover plates labelled "Earth Test Point".	m	28
18	Conductive Cement	No	28

BONDING OF PILLARS INSIDE SCHOOL BLOCKS AND RAIN GUTTERS

The steel pillars next to the covered walkways inside school blocks must be bonded to the roof and to earth pegs in lieu of the earthing conductor with a test box

19	Install 1,5m SABS Approved earthrods at a depth off 500mm below ground level	No	90
20	70mm ² Insulated Copper wire	m	400
21	Bond to test point as per drawing.	No	90
22	Electrochemical /Exothermic connection	No	90
23	Trenching in soft rock	m3	42
24	PVC conduit 25mm diametre (from conduit box to the earth peg outside the building)	m	500

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EARTHING AND LIGHTNING PROTECTION**

25	105mm x 105 mm galvanized conduit box located 300 mm above finished floor level and fitted with blank PVC cover plates labelled "Earth Test Point".	No	90		
26	Conductive Cement	No	90		
<u>TESTING AND COMMISSIONING</u>					
27	Testing and commissioning and issuing of COC for the complete earthing and lightning protection installation			Item	
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EARTHING AND LIGHTNING PROTECTION

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ELECTRICAL INSTALLATION

Bill No. 3

EARTHING AND LIGHTNING PROTECTION

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 4</u></p> <p><u>EMERGENCY POWER SYSTEM</u></p> <p>NOTE: Tenderers are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).</p> <p><u>STANDBY GENERATOR</u></p> <p><u>Supply and install a stand-by diesel Generators as specified having prime rating output at site conditions. Work to include construction of concrete foundation & steel cage, delivery, off-loading, placing of genset,termination of cables, installation of power cable & earthing , supply & erection of bulk fuel tank & piping and any other works as required :- NB: Distribution cables are measured elsewhere.</u></p>			
1	150 kVA, 1500 r.p.m, 415 V/230 V, 50 Hz, diesel, watercooled engine, sound attenuated indoor generating set. Sound attenuation to 70 dBA at 7meters in accordance with specification.	No	1	
2	Testing, Commissioning of the above as specified at site conditions with one year maintenance.	No	1	
3	2250 litres cylindrical, horizontal steel fuel bulk storage tank below the generator compliant to SANS 10131 complete with automatic fuel pump and pipework supplied and installed. Work to include construction of concrete foundation, placing of fuel tank & piping connections.	No	1	
4	Maintenance contract after handover.	Months	12	
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	<p>Section No. 3 ELECTRICAL INSTALLATION Bill No. 4 EMERGENCY POWER SYSTEM</p>			

UNINTERRUPTIBLE POWER SUPPLY

Supply and install an uninterruptible power supply system.

Work to include placing UPS, wiring of UPS, termination of cables, installation of power cable & earthing where required :-

5	Supply, Installation, testing and commissioning of rack mountable Uninterruptible Power Supply (UPS) system of - 3 kVA for > 0.99 pf. n+1 type with individual 15-30 mins battery back up and as per specification of tender . The work shall include tapping power from nearby SSO equipped with MCB. All wiring from battery to UPS shall be part of Tenderer's scope and all batteries shall be SMF type.	No	2
6	Supply, Installation, testing and commissioning of rack mountable Uninterruptible Power Supply (UPS) system of - 1,5 kVA for > 0.99 pf. n+1 type with individual 15-30 mins battery back up and as per specification of tender . The work shall include tapping power from nearby SSO equipped with MCB. All wiring from battery to UPS shall be part of Tenderer's scope and all batteries shall be SMF type.	No	14

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EMERGENCY POWER SYSTEM

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Item No		Quantity	Rate	Amount
<u>BILL NO. 5</u>				
<u>AREA AN SECURITY LIGHTING</u>				
NOTE: Tenderers are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).				
<u>Supply and install area and security lights as indicated in drawings</u>				
1	Type S (Post top type luminaire with 55W LED lamp mounted on a 4.6m high pole)	No	70	
2	Supply & install 76 mm top diameter hot dipped galvanised steel mast of mineral grey paint finish with overall length of 4.6 m for direct embedment in ground and complete with accessories including 2,5 mm ² internal wiring, BCEW, pole earthing and access cover as per specifications	No	70	
3	Supply, install and connect up die cast aluminium body with tempered glass LED floodlight Luminaire equipped with motion sensor. Total power rating of LEDs to be 30W with built-in driver. Adjustable sensor for Lux, time and sensitivity of 25 metre range throughput. IP rating of IP65. Luminaire is describe as Type D in technical specification.	No	10	
4	Type C (Ceiling mounted 18W LED round bulkhead IP65 light fitting with prismatic acrylic diffuser) for walkways	No	95	
<u>CABLES, CONDUCTORS & SLEEVES</u>				
5	6mm ² x 3 core PVC/SWA/PVC Alu cable (underground cables for post tops)	No	2 000	
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Section No. 3 ELECTRICAL INSTALLATION Bill No. 5 AREA AND SECURITY LIGHTING				

6	6mm2 x 3 core PVC/SWA/PVC Alu cable (running on the walkways for walkway bulkhead lights)	No	1 400		
<u>GLANDS AND SHROUDS</u>					
7	6mm2 x 3 core PVC/SWA/PVC Alu cable	No	350		
<u>LIGHTING CONTROL</u>					
8	Photocell	No	18		
9	32 A contactor switch with 240 V AC coil, enclosed in distribution enclosure and coupled to photocell.	No	18		
<u>CABLE MARKERS & WARNING TAPES</u>					
10	Cable warning tape	m	1 800		
<u>SUPPLY & INSTALL UPVC SLEEVES (Rate to include 2,5mm2 draw wire)</u>					
11	50mm Diameter	m	300		
12	25mm Diameter	m	2 500		
<u>TRENCHING AND EXCAVATIONS (450mm wide & 800mm deep), Rate to include backfilling, compacting and other necessary materials required for around the cables</u>					
13	Pickable soil	m3	650		
<u>TESTING AND COMMISSIONING</u>					
14	Testing and commissioning and issuing of COC for the complete lighting installation			Item	
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Item No		Quantity	Rate	Amount
	<u>BILL NO. 6</u>			
	<u>FIRE DETECTION</u>			
	NOTE: Tenderers are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).			
	<u>CABLES</u>			
	<u>Fire retardant insulated twin copper conductors drawn into conduit/trunking complete with all required fittings and accessories, terminations, lugs etc:</u>			
1	1.5 sq. mm 2-Core PH30 fire alarm cable Communication LINK cable between the panels 2 wire	m	150	
	<u>FIELD DEVICES AND ACCESSORIES</u>			
	<u>Addressable break-glass type fire alarm contact c/w resettable element, hinged cover and breakable seal as specified fixed to draw box provided in block work:</u>			
2	Surface or recessed mounted type.	No	11	
3	Supply and install remote LED indicating unit on the underside of false ceiling for the respective optical smoke detector installed above false ceiling including the interconnecting cable.	No	4	
	<u>Alarm sounder/flasher combo:</u>			
4	24 V DC, 100 dB, weatherproof to IP65 with synchronized alarm tones combined with 4 W flasher with orange strobe	No	12	
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Item No		Quantity	Rate	Amount
	<u>BILL NO. 7</u>			
	<u>ICT & ELECTRONIC INSTALLATION</u>			
	NOTE: Tenderers are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).			
	The complete installation must comply to GDID electrical installation specifications. Therefore Tenders are advised to study the specifications and drawings before the Bill is to be price.			
	<u>CONDUITS (Installation of conduits for ICT and Electronic installation)</u>			
	<u>Supply and Install pipes including short lengths jointing, sweeping bends, buses, locknuts, roundboxes et</u>			
1	25mm diameter PVC pipe cast into concrete, brick work or suspended in ceiling voids	m	10 000	
2	32mm diameter PVC pipe cast into concrete, brick work or suspended in ceiling voids	m	2 000	
3	25mm diameter copex conduit	m	300	
	<u>Supply and install steel galvanised walls boxes complete with all accessories</u>			
4	100mm x 50mm x 50mm deep	No	400	
5	100mm x 100mm x 50mm deep	No	400	
6	Supply and install 1,6mm diameter steel galvanised draw wires drawn into conduit/sleeves:	m	4 000	
7	Supply and install 100mm x 100mm blank cover plates	No	50	
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8	Supply and install 25mm diameter 4 way PVC round boxes	No	2 500		
9	Supply and install 32mm diameter 4 way PVC round boxes	No	500		
10	Supply and install 100mm x 50 blank plates	No	50		
11	Supply and Install 450mm x 350mm x 125mm deep box	No	35		
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Bill No. 7

ICT & ELECTRONIC INSTALLATION CONDUITS

Item No		Quantity	Rate	Amount
<u>BILL NO. 1</u>				
<u>10G FIBRE OPTIC BACKBONE NETWORK</u>				
NOTE: Tenderes are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).				
The complete installation must comply to GDID electrical installation specifications. Therefore Tenders are advised to study the specifications and drawings before pricing the Bill.				
<u>Installation of a modular hierarchical 10G Fibre Optic Backbone Network (For CCTV, Data and IP Telephony) with redundancy as per the drawings.</u>				
1	Multimode fibre, 4 core, OM4	m	1 000	
2	XFP, SFP+ Modules, 10G Transceivers	No	44	
3	1U Rack Mount, Fibre Optic Sliding Patch Panel / splice box	No	17	
4	Fiber Optic Patch Cables, Multimode OM4, Duplex, 50/125	No	50	
5	Fibre splicing	No	50	
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Section No. 4 ELECTRONIC INSTALLATION Bill No. 1 10G FIBRE OPTIC BACKBONE NETWORK				

6	Core Switch -Multilayer (L2, L3, L4) - Managed - 24 x 10G SFP+; 4 x 10GbE; GigE port aggregation, IEEE 802.1q; VLANs - Port-based; Voice VLAN; Spanning Tree Protocols: 802.1d/w/s (RSTP, MSTP and Rapid PVST+); DHCP & DHCP Relay; Layer 3 Routing; IGMP v1/v2/v3; Protocol Independent Multicast (PIM); SNMP v1/v2/v3; Syslog; SMTP alert; ACLs; MAC filtering; DoS Control; Quality of service (QoS); IP ARP / RARP; Super-netting (CIDR), Port security; SSL/HTTP; SSH/Secure Shell ; RADIUS/ TACACS+ Client; IPv4 & IPv6; PoE - IEEE 802.3af; [2NO instlled, 1NO spare]	No	3		
7	Server Access Switch. Layer 2, Managed, GigE - 48 x 10/100/1000 + 4 x 10 Gigabit SFP+; Spanning Tree Protocols: 802.1d/w/s (RSTP, MSTP and Rapid PVST+); IGMP Snooping: v1/v2/v3 ; PIM; VLANs: 4K IEEE 802.11Q VLANs: Port-based; Port Security; SSL/HTTP; SSH/Secure Shell ; RADIUS/ TACACS+ Client; - rack-mountable, PoE - IEEE 802.3af; . [2NO instlled, 1NO spare]	No	3		
8	Field Access Switch. Layer 2, Managed, GigE - 48 x 10/100/1000 + 2 x 10 Gigabit SFP+, Spanning Tree Protocols: 802.1d/w/s (RSTP, MSTP & Rapid PVST+); IGMP Snooping: v1/v2/v3; PIM; VLANs - Port-based; Port Security; SSL/HTTP; SSH/Secure Shell ; RADIUS/ TACACS+ Client; - rack-mountable, PoE - IEEE 802.3af; [13NO instlled plus 2NO spare] (2 for admin block, 4 for block C, 4 for block D, 1 for block B and 1 for block EP)	No	14		
9	Field Access Switch. Layer 2, Managed, GigE - 24 x 10/100/1000 + 2 x 10 Gigabit SFP+, Spanning Tree Protocols: 802.1d/w/s (RSTP, MSTP & Rapid PVST+); IGMP Snooping: v1/v2/v3; PIM; VLANs - Port-based; Port Security; SSL/HTTP; SSH/Secure Shell ; RADIUS/ TACACS+ Client; - rack-mountable, PoE - IEEE 802.3af; [1NO instlled plus 1NO spare] (1 for L)	No	2		
10	Field Access Switch. Layer 2, Managed, GigE - 8 x 10/100/1000 + 2 x 10 Gigabit SFP+, Spanning Tree Protocols: 802.1d/w/s (RSTP, MSTP and Rapid PVST+); IGMP Snooping: v1/v2/v3; PIM; VLANs - Port-based; Port Security; SSL/HTTP; SSH/Secure Shell ; RADIUS/ TACACS+ Client; - rack-mountable, PoE - IEEE 802.3af; [2NO installed plus 1NO spare] (1 for guard house and 1 for sport facility)	No	3		
11	25mm PVC conduiting and accessories	m	1 000		
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10G FIBRE OPTIC BACKBONE NETWORK					

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12	43U 19inch cabinet, integrated rack, incl cooling fans, rack shelves, rack rails. Rack must also come with a 230V, 16A, 3pin round (X 10 socket) outlets adapter, white in colour, suitable for mounting on the 19" rack	No	2		
13	12U fixed swing out cabinet, wall mount, lockable, incl cooling fans, rack shelves, rack rails. Rack must also come with a 230V, 16A, 3pin round (X 10 socket) outlets adapter, suitable for mounting on the 19" rack	No	13		
14	4U fixed swing out cabinet, wall mount, lockable, incl cooling fans, rack shelves, rack rails. Rack must also come with a 230V, 16A, 3pin round (X 10 socket) outlets adapter, suitable for mounting on the 19" rack	No	2		
15	3kVA 3phase UPS system with 30 minutes autonomy:	No	2		
16	1.5kVA inline, rack mount, UPS system with 30 minutes autonomy:	No	13		
17	800VA inline, rack mount, UPS system with 30 minutes autonomy:	No	2		
<u>Civil Works</u>					
<u>Prices to include excavation, refilling, levelling, compacting and reparation of all surfaces to the original finish</u>					
18	110mm kableflex Sleeve	m	1 600		
19	50mm kableflex sleeve	m	600		
20	Excavating in Earth	m3	480		
<u>Manholes</u>					
21	600mm (l) x 600mm (w) x 1000mm (depth)	No	25		
22	800mm (l) x 800mm (w) x 1000mm (depth)	No	2		
<u>Testing and Commissioning</u>					
23	Testing, Commissioning of Installation and supply of OTDR results	No	1		
24	Manuals, Documentation, AS Builts	No	3		
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10G FIBRE OPTIC BACKBONE NETWORK

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 2</u></p> <p><u>CCTV SURVEILLANCE</u></p> <p>NOTE: Tenderes are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).</p> <p>The complete installation must comply to GDID electrical installation specifications. Therefore Tenders are advised to study the specifications and drawings before pricing the Bill.</p> <p><u>Installation of an IP CCTV Surveillance and Recording System, with 7 days recording (on motion detection), no archieving. System must be configured in its own single VLAN</u></p>			
1	<p>Fixed Outdoor Bullet Network Camera. IP66, Full HD 1080p (1920 x 1080), Built-in IR illumination. Image sensor: 1/3.0" progressive scan RGB CMOS, Varifocal lens (3 - 75mm) , H.264 High - high quality, 30 fps; HTTPSa encryption, IEEE 802.1Xa, Digest authentication. Protocols: IPv4/v6, HTTP, HTTPSa, SSL/TLSa, QoS Layer 3 DiffServ. Video Motion Detection, Active tampering alarm. Event actions Notification: Power over Ethernet (PoE) IEEE 802.3at, 8G Class 10 SD card. Inclusive of all mounting brackets</p>	No	50	
	<p style="text-align: right;">Carried to Collection</p> <p>Section No. 4 ELECTRONIC INSTALLATION Bill No. 2 CCTV SURVEILLANCE</p>		R	

2	Fixed Indoor Dome Camera. Full HD 1080p (1920 x 1080), Built-in IR illumination. Image sensor: 1/3.0" progressive scan RGB CMOS, Varifocal lens (3 - 75mm), Wide Dynamic range (WDR), Horizontal angle of view 100° - 35°: H.264 High, 25/30 fps; HTTPSa encryption, IEEE 802.1Xa, Digest authentication. Protocols: IPv4/v6, HTTP, HTTPSa, SSL/TLSa, QoS Layer 3 DiffServ. Video Motion Detection, Active tampering alarm. Event actions Notification: Power over Ethernet (PoE) IEEE 802.3at, 64G Class 10 SD card, ONVIF; Corridor Format; Multi-view streaming, complete with ceiling/wall mounting brackets.	No	10		
3	Operators Workstation, 1 x Xeon E5-1620V4 / 3.5 GHz - RAM 16 GB, HDD 1T, AMD Firepro 2GB Graphics with 4 (Display ports) Outputs, Serial port adaptor; Win 7 Pro 64-bit (includes Win 10 Pro 64-bit Licence) - vPro -	No	2		
4	Operators Work Station Biometric Fingerprint Log ON reader	No	2		
5	Video Wall Server - tower - 5U - 2-way - 1 x Xeon E5-2609V3 / 1.9 GHz - RAM 16 GB - SATA - hot-swap 3.5" - HDD 2 x 1 TB - 2 x 10GigE - MS Windows Server 2008 R2, AMD Firepro 2GB Graphics with 2 (Display ports) Outputs.	No	2		
6	55-inch Full LED Display, 1080p	No	2		
7	32 Channels Embedded Network Video Recorder, 48TB. ONVIF/PSIA, eSATA, HDMI/VGA/BNC, H.264 High - high quality, Rack mount. NAS server - RAID 5, 10GbE - iSCSI. 2U.	No	2		
8	24 Port Patch Panel: CAT 6a	No	15		
9	24 Port Patch Panel Lead: CAT 6a	No	240		
10	19" rack mount, 1U Brush Panels	No	15		
11	CAT 6a UTP Cable (Colour: Blue)	m	3 500		
12	RJ45 Connectors complete with boots	No	92		
13	CAT 6a UTP Fly Leads, 2m (blue)	No	6		
14	25mm pvc conduiting and accessories	m	1 000		
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Testing and Commissioning

15	Testing and Commissioning of Installation	No	1
16	Manuals, Documentation, AS Builts	No	3
17	Training of Personnel	No	2

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Item No		Quantity	Rate	Amount
<u>BILL NO. 3</u>				
<u>DATA NETWORK</u>				
NOTE: Tenderes are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).				
The complete installation must comply to GDID electrical installation specifications. Therefore Tenders are advised to study the specifications and drawings before pricing the Bill.				
<u>Installation of wired data points, wireless access points as specified and as indicated on drawings. Wired data and wireless data must not be configured in the same VLAN. Separate Vlans to be configured</u>				
1	CAT6a UTP Cable (Colour: Grey)	m	8 000	
2	CAT 6a UTP Fly Leads, 2m (Grey) . Includes 10 spare	No	128	
3	Wired data points (incl wifi points) on power skirting or wall mounted as specified and as indicated on drawings. (Inclusive of boxes, RJ45 faceplates & Cat 6 termination)	No	195	
4	Indoor Wireless Access Point Device. Features: 802.11ac MU-MIMO technology, 802.11i, WPA2, WPA, 802.1X , AES, PoE	No	70	
5	Wireless LAN Controller with 50 AP License. Wireless intrusion prevention system (IPS) capabilities, RF management, QoS, and Layer 3 fast secure roaming. 2 x 10 GigE support, PoE	No	1	
6	Authentication Server, hardware, operational software & server licence	No	1	
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Section No. 4 ELECTRONIC INSTALLATION Bill No. 3 DATA NETWORK				

7	25mm PVC conduiting and accessories	m	1 500		
<u>Testing and Commissioning</u>					
8	Testing and Commissioning of Installation	No	1		
9	Manuals, Documentation, AS Builts	No	3		

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ELECTRONIC INSTALLATION
Bill No. 3
DATA NETWORK

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ELECTRONIC INSTALLATION

Bill No. 3

DATA NETWORK

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Bill No. 3
DATA NETWORK

6	Main Telephone DB	No	1		
7	Outdoor Telephone Supporting Structure	No	1		
8	Line Lightning Arresters and Earthing	No	4		
9	Telephone data points on power skirting or wall mounted as specified and as indicated on drawings.(Inclusive of boxes, RJ45 faceplates, Cat 6 cable termination)	No	25		
10	25mm galvanized conduiting and accessories	m	200		
<u>Testing and Commissioning</u>					
11	Testing and Commissioning of Installation	No	1		
12	Manuals, Documentation, AS Builts	No	3		
13	Training of Personnel	No	2		
Carried to Collection					
Section No. 4 ELECTRONIC INSTALLATION Bill No. 4 IP TELEPHONE SYSTEM					R

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IP TELEPHONE SYSTEM

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IP TELEPHONE SYSTEM

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 5</u>			
	<u>INTRUDER ALARM SYSTEM</u>			
	NOTE: Tenderes are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).			
	Installation of an alarm system with localised distinct specified alarm areas / zones.			
1	Master Alarm Controller unit	No	1	
2	Alarm LED Zone indicator / Mimic Panel	No	2	
3	Full Message hardwired LCD Keyboard	No	18	
4	8 - Zone, hardwired Expander Module	No	7	
5	PIR Motion Detector - Internal	No	220	
6	PIR Motion Detector - External	No	16	
7	Arming Device / 2 or 4 Wireless Button Key	No	15	
8	Wired Panic Button	No	22	
9	Outdoor 15W, Electric Siren, 12VDC, Loud Sounder	No	15	
10	Communication network module. [GSM / GPRS module, TCP/IP module, Serial interface). To link with external security company or SAPS	No	1	
	Carried to Collection			R
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	ELECTRONIC INSTALLATION			
	Bill No. 5			
	INTRUDER ALARM SYSTEM			

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ELECTRONIC INSTALLATION

Bill No. 5

INTRUDER ALARM SYSTEM

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ELECTRONIC INSTALLATION
Bill No. 5
INTRUDER ALARM SYSTEM

Item No		Quantity	Rate	Amount
	<u>BILL NO. 6</u>			
	<u>INTERCOM SYSTEM</u>			
	NOTE: Tenderes are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).			
	The complete installation must comply to GDID electrical installation specifications. Therefore Tenders are advised to study the specifications and drawings before pricing the Bill.			
	<u>Installation of an analogue intercom system.</u>			
1	90 Way Intercom Controller Master Station. Must support or drive a minimum of 90 speakers.	No	1	
2	High quality, wall mount, indoor, intercom module complete with Speaker (10W) & microphone. The microphone must be very sensitive, able to clearly pick audio in a class environment when activated with no feedback	No	98	
3	Outdoor Intercom module complete with Horn Speaker (5-30W) & microphone. (IP66)	No	18	
4	Program Preset Timer for School Bell System (hardware unit with lcd display, running bell control software)	No	1	
5	School siren to be located in the admin block. The siren to be activated from three push button located in the strongroom, server room and security room	No	1	
6	Paging console with Gooseneck microphone	No	1	
7	Terminal Box: Lockable, Flush mount with knockouts 300 x 400 x 140mm	No	10	
	Carried to Collection			R
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	Bill No. 6			
	INTERCOM SYSTEM			

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ELECTRONIC INSTALLATION

Bill No. 6

INTERCOM SYSTEM

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Bill No. 6
INTERCOM SYSTEM

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 7</u>			
	<u>SCHOOL HALL POWER AMPLIFIER SYSTEM</u>			
	NOTE: Tenderes are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).			
	The complete installation must comply to GDID electrical installation specifications. Therefore Tenders are advised to study the specifications and drawings before pricing the Bill.			
	<u>Installation of a PA System comprising of an amplifier/s, loudspeakers & microphones (next to the stage control console). All equipment must be secured against theft & vandalism</u>			
1	Audio Feedback Suppressor (Digital Sound Processor)	No	1	
2	16 Channel Mixer, 4 Bus mixer	No	1	
3	Audio Matrix Processor: 6 Input and 6 Output Digital Audio Matrix Processor	No	1	
4	Professional Stereo Power Amplifier 300W/CH @8-OHM 2-Ch Amp	No	2	
5	High-end Entertainment Loudspeaker: Impedance: 8Ω, Rated power: 300W, Frequency: 45Hz-20KHz, Sensitivity: 99dB/W/M, Angle of Coverage: (H)90°(V)70°, Treble:1.5 "compression neodymium tweeter x 1, Bass:12 "bass x 1, Dimensions:600 x 350 x 380 mm, Weight: 16kg	No	6	
6	Active Line Array Loudspeaker (Stage Monitors)	No	3	
7	CD/MP3/DVD Player with AM/FM Tuner	No	1	
	Carried to Collection			R
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	ELECTRONIC INSTALLATION			
	Bill No. 7			
	SCHOOL HALL POWER AMPLIFIER SYSTEM			

8	8 Channel Power Sequencer	No	1		
9	Microphone Processor	No	1		
10	Handheld Mics (wired or cable type)	No	6		
11	UHF Wireless Mic	No	2		
12	Ready made speaker cable with jacks (20m)	No	10		
13	Flush Box Microphone Point: Centre of Stage	No	3		
14	Flush Box Microphone Point:Multi Media	No	1		
15	Flush Box Microphone Point: Next to Stage Control Console	No	1		
16	25mm PVC conduiting and accessories	m	300		
17	12m stage lighting truss with mounting fixtures	No	2		
18	DM-X12 DMX controller with joystick - 192 channel	No	1		
19	DMX Cable HQ 5mm black (100mm each)	No	4		
20	100m roll NNS-1492 2,5mm speaker cables	No	4		
21	Track mountable high beam professional cylindrical LED par CAN 16 Channel DMX & sound activated stage lighting 0-100% dimmable c/w 18 x 10W 4-in-1 LED and with electronic control gear)	No	10		
<u>Testing and Commissioning</u>					
22	Testing and Commissioning of Installation	No	1		
23	Manuals and Documentation	No	3		
24	Training of Personnel	No	1		
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SCHOOL HALL POWER AMPLIFIER SYSTEM					
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ELECTRONIC INSTALLATION

Bill No. 7

SCHOOL HALL POWER AMPLIFIER SYSTEM

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ELECTRONIC INSTALLATION

Bill No. 7

SCHOOL HALL POWER AMPLIFIER SYSTEM

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 8</u>			
	<u>OVERHEAD PROJECTORS</u>			
	NOTE: Tenderes are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).			
	The complete installation must comply to GDID electrical installation specifications. Therefore Tenders are advised to study the specifications and drawings before pricing the Bill.			
	<u>Installation of overhead projector points in the School Hall only</u>			
1	Full HD, 1080p, business Projector	No	1	
2	Projector mounting base & all mounting accesories.	No	1	
3	Lockable galvanized box. To house the Active Extender kits & RJ45 point. 300 x 200 x 100mm. Supply complete with lock / keys	No	2	
4	Wired data points as specified and as indicated on drawings. (Inclusive of boxes, RJ45 faceplates & Cat 6e termination)	No	3	
5	Active Extender Kit. HDMI Display Port to HDMI over CAT 6e	No	3	
6	Active Extender Kit. VGA Display Port to VGA over CAT 6e	No	3	
7	CAT 6e Cable	No	50	
8	2m cable -. Full HD 1080p HDMI cable	No	3	
9	2m cable - VGA Cable	No	3	
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	Bill No. 8			
	OVERHEAD PROJECTORS			

10	2m cable - USB A Male to RJ45 serial Data Cable	No	3		
11	25mm galvanized conduiting and accessories	No	50		
12	3 way video- audio splitter Box	No	1		
13	Projector screens GRANDVIEW 196" 16:10 Ratio CNV series motorised white screen with IR control & 12V trigger, 4,22,2 x 2,638mm	No	1		
<u>Testing and Commissioning</u>					
14	Testing and Commissioning of Installation	No	1		
15	Manuals and Documentation	No	1		
16	Training of Personnel	No	1		
Carried to Collection					
Section No. 4 ELECTRONIC INSTALLATION Bill No. 8 OVERHEAD PROJECTORS				R	

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ELECTRONIC INSTALLATION

Bill No. 8

OVERHEAD PROJECTORS

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Bill No. 8
OVERHEAD PROJECTORS

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 9</u>			
	<u>ACCESS CONTROL</u>			
	NOTE: Tenderes are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).			
	The complete installation must comply to GDID electrical installation specifications. Therefore Tenders are advised to study the specifications and drawings before pricing the Bill.			
	<u>Installation of Electric Door Openers with Two-way Intercom Communication</u>			
1	Heavy Duty Aluminum Commercial Door Closer +45kgs	No	3	
2	12V Electric Door Lock	No	3	
3	Exit Button	No	3	
4	Two-way point to point Intercom (1 master with 3 slaves)	No	1	
5	Mylar cable	m	50	
6	25mm galvanized conduiting and accessories	m	15	
7	12v Power Supply and sealed 7Ah rechargeable battery	No	1	
	<u>Testing and Commissioning</u>			
8	Testing and Commissioning of Installation	No	1	
9	Manuals and Documentation	No	1	
10	Training of Personnel	No	1	
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	Bill No. 9			
	ACCESS CONTROL			

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 10</u></p> <p><u>PREVENTIVE MAINTENANCE</u></p> <p>NOTE: Tenderes are advised to study the latest version of the *Guidelines for Electrical Installation requirements for new prototype schools*. The requirements of the Guidelines for Electrical Installation requirements for New Prototype Schools will however take precedence over Standard Quality Specification for General Electrical Installations (GP/E6/1 Revision 1) and Standard Quality Specification for General Electrical Material and Equipment (GP/E6/2 Revision 1).</p> <p>The complete installation must comply to GDID electrical installation specifications. Therefore Tenders are advised to study the specifications and drawings before pricing the B</p> <p><u>Contractor must vist the school twice a month and perform preventive maintenance on all the installations. A detailed maintenace schedule must be submitted to the Engineer upon delivery of each installation</u></p>			
1	10G Fibre Optic Network	mnths	12	
2	CCTV Surveillance System	mnths	12	
3	Data Network	mnths	12	
4	IP Telephone System	mnths	12	
5	Intruder Alarm System	mnths	12	
6	Intercom System	mnths	12	
	Carried to Collection			R
	<p>Section No. 4 ELECTRONIC INSTALLATION Bill No. 10 PREVENTIVE MAINTENANCE</p>			

7	School Hall: Power Amplifier System	mnths	12
8	Overhead Projectors	mnths	12
9	Bell Sounder System	mnths	12
10	Access Control	mnths	12

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ELECTRONIC INSTALLATION
Bill No. 10
PREVENTIVE MAINTENANCE

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Bill No. 10

PREVENTIVE MAINTENANCE

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Bill No. 10
PREVENTIVE MAINTENANCE

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2	CCTV SURVEILLANCE	190	
3	DATA NETWORK	193	
4	IP TELEPHONE SYSTEM	196	
5	INTRUDER ALARM SYSTEM	199	
6	INTERCOM SYSTEM	202	
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8	OVERHEAD PROJECTORS	208	
9	ACCESS CONTROL	209	
10	PREVENTIVE MAINTENANCE	212	
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Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 1</u></p> <p><u>HVAC SYSTEM</u></p> <p>NOTE: Tenderers are referred to The HVAC Tender specification. The supply, delivery, installation and commissioning of equipment as shall be detailed in this schedule.</p> <p>Unless a specific percentage mark-up for Profit and Attendance is indicated in a rate column, the amount priced by the Contractor for Profit and Attendance shall be deemed to be included</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>VENTILATION SYSTEM INSTALLATION</u></p> <p>The Contractor shall supply, install, and commission according to tender drawing. The rates shall include labour, all mounting and accessories, including connection to the point of supply. Guarantee and maintenance of efficient and safe working of the installation for 12 months after hand over of the completed building to the client. A COC for electrical installation is to be provided for each installation as per SANS 347 And CoC for all HVAC installed equipment as per SANS 347</p>			
1	Complete in-line Silent Fresh air fan (500l/s), 220V, 50/60Hz, speed controllable, IP44, class F, with thermal protection and complete weather louvre with air filter placed at the inlet side @20-24dBA. To linked to the Air-conditioning command switch.	No	2	
2	Complete in-line Silent Fresh air fan(80l/s),220V,50/60hz, speed controllable,IP44, class F, with thermal protection and complete weather louver with air filter placed at the inlet side @20-24dBA.To linked to the Air-Conditioning command switch.	No	1	
3	Complete 60l/s Ceiling Silent extractor fan,220V,50/60hz, 2.5A speed controllable @20-24dBA with thermal protection.	No	1	
	Carried to Collection			R
	<p>Section No. 5 MECHANICAL INSTALLATION Bill No. 1 HVAC SYSTEM</p>			

HEAT PUMP MID WALL SPLIT UNIT INVERTER

Design, manufacture, works testing, supply and deliver to site, moving into position, erection, connecting up, site testing, witness testing, proving to insurance inspectors, demonstrating to the Employer, commissioning and maintenance of the complete mechanical systems and equipment as shown on the drawings and data sheets

MIDWALL HEAT PUMP SPLIT UNITS

Supply and install inverter type DX heat pump inverter midwall split units complete with fittings and fixtures, including insulated supply and return air plenum boxes, as specified and shown on the drawing

4	Complete 5.6 kW Inverter Under ceiling unit serving the Admin Office Block+Remote controller	No	8
5	Complete 7.25 kW Inverter Under ceiling unit serving the Admin Office Block+Remote controller	No	2
6	Complete 2.8 kW Inverter midwall unit serving the Admin Office Block+Remote controller	No	22
7	Complete 3.6 kW Inverter midwall unit serving the Admin Office Block+Remote controller	No	3
8	Complete 10.5 kW Underceiling Inverter unit,52 dB(A),1,750 x 650 x 220 mm, serving Science Lab +Remote controller	No	18
9	Complete 2.2 kW Inverter midwall unit serving the Admin Office Block+Remote controller	No	10

REFRIGERANT PIPING (R 32)

Refrigerant pipes complete with thermal insulation, other fittings and fixtures, brackets, pressure tested and fully charged up with refrigerant in accordance with datasheets and specifications for the above.

10	15.9mm Diameter	m	120
11	12.7mm Diameter	m	180
12	9.6mm Diameter	m	120

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**Section No. 5
MECHANICAL INSTALLATION
Bill No. 1
HVAC SYSTEM**

13	6.7mm Diameter	m	180		
	<u>Supply and install cable rack for refrigerant piping c/w joints and fixtures and fittings.</u>				
14	200mm Wide	m	6		
15	100mm Wide	m	16		
16	50mm Wide	m	8		
	<u>Supply and install trunking for refrigerant piping c/w joints and fixtures and fittings.</u>				
17	100mm Wide	m	18		
	<u>Supply PVC condensate pipes c/w joints and fixtures and fittings</u>				
18	50mm Diameter	m	150		
19	25mm Diameter	m	180		
20	20mm Diameter	m	60		
	<u>CONTROL UNITS</u>				
21	Supply and install remote control units as specified for all DX split air conditioning units.	No	63		
	<u>Galvanised sheet metal ducting without internal insulation</u>				
22	Duct of 250mm diameter	m	80		
23	Duct of 320mm diameter	m	60		
24	150mm diameter Flexible duct	m	120		
25	250mm diameter Flexible duct	m	90		
	<u>TERMINALS</u>				
26	20 l/s, Fresh air grille (600x600)	No	24		
27	60 l/s, Fresh air grille (600x600)	No	30		
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<u>ELECTRICAL WORK</u>				
48	Supply and install electrical work including power and control cabling and connections from the Isolator to the unit as Specified for the air conditioning units. Power supply from DB to lockable isolator next to the unit to be provided by Electrical Contractor	Item		
<u>Locable vandal Proof Cages</u>				
Cages to be hot dip galvanised and must be complete with lock to secure the installed condenser				
49	Supply, deliver to site, installation of lockable cages to secure outside condensing units of the air conditioners	Item		
<u>TEST & COMMISSION</u>				
50	Test and Commission the Entire Air conditioning system		SUM	
51	Ditto but in the presence of and to the entire satisfaction of the Consulting Engineer.		SUM	
<u>Maintenance</u>				
52	<u>Supply, delivery, installation, commissioning and 12 months maintenance of the following complete HVAC equipment with all mounting accessories as shown on the tender drawings:</u>	Months	12	
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MECHANICAL INSTALLATION

Bill No. 1

HVAC SYSTEM

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MECHANICAL INSTALLATION
Bill No. 1
HVAC SYSTEM

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 2</u></p> <p><u>VENTILATION INSTALLATION</u></p> <p>NOTE: Tenderers are referred to The HVAC Tender specification. The supply, delivery, installation and commissioning of equipment as shall be detailed in this schedule.</p> <p><u>Fresh Air Plant</u></p> <p>"Rate" includes material. delivery & installation labour.</p> <p><u>3900l/s against 150 Pa, Fresh air centrifugal fan. Fan shall an Index NC 35 according to the background noise design criterion for ventilation systems. Fan to have soft starter and three speed manual control</u></p>			
1	(Low,Medium & High) and fire signal deactivation contractor.	No	2	
	<p><u>Air filtration Plenum</u></p> <p><u>3050x1850x500 mm Plenum with access panel, Filter frame and dirty filter manometer</u></p>			
2	Plenum		Item	
3	Manometer gauge		Item	
4	Washable filters 600x600x50mm		Item	
	<p><u>FRESH AIR DUCTWORK</u></p> <p>Supply and install ductwork to SMACNA as specified and shown on the drawings including wall boxes, bends, transformations, flexible connections, MEZ flanges etc. as per notes shown on the drawings.</p>			
	Carried to Collection			
	<p>Section No. 5 MECHANICAL INSTALLATION Bill No. 2 VENTILATION INSTALLATION</p>			
			R	

<u>INDOOR UNITS COMPLETE AND ALL ACCESSORIES AS SPECIFIED</u>				
21	Complete 10.5 kW Under ceiling Inverter unit,52 dB(A),1,750 x 650 x 220 mm, serving Science Lab +Remote controller	No	4	
22	Complete 2.2 kW Inverter mid wall unit serving the Admin Office Block+Remote controller	No	1	
<u>COPPER PIPING COMPLETE WITH INSULATION WITH ALL ACCESSORIES</u>				
23	Pipe 6.7mm diameter	m	6	
24	Pipe 12mm diameter	m	6	
25	Pipe 9.6mm diameter	m	24	
26	Pipe 15.9mm diameter	m	24	
27	Draining pipe ϕ 25mm(Galvanised pipe)	m	20	
<u>ACCESSORIES</u>				
28	Cable tray 100x50mm	m	20	
29	Complete Weather Louvre with air filter (300x250)	No	4	
30	Supply 350 x 350 Aluminium Door Grill	No	8	
31	Brackets with anchors	No	10	
32	600 x 1200 ceiling grille	No	20	
33	650 x 650 Louvres, 45 degree blades inclination incorporated of air filer and mesh	No	20	
34	Workshop drawing Commissioning of the full System and equipment submission for approval,COC , Acceptance and signing off			SUM
35	Electrical Works (associated with HVAC installation as above)			SUM
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Section No. 5 MECHANICAL INSTALLATION Bill No. 2 VENTILATION INSTALLATION				

DIFFUSERS

Supply and install air diffusers as specified and shown on the drawings

44	CV01 Size: 300mm dia	No	20
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WEATHER LOUVRES

Supply and install weather louvres for fresh air complete as specified and shown on the drawings

45	[WL01] Size: 1200x 1200mm high	No	4
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46	[WL02] Size: 800x 400mm high	No	1
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BALANCING DAMPERS

Supply and install butterfly dampers complete spigot as specified and shown on the drawings

47	(BD] Size: 300mm dia	No	20
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48	(BD] Size: 200mm dia	No	2
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49	(BD] Size:150mm dia	No	2
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MECHANICAL INSTALLATION
Bill No. 2
VENTILATION INSTALLATION

<u>ELECTRICAL WORK</u>				
58	Supply and install electrical work including power and control cabling and connections as specified for the Ventilation and smoke control systems.	Item		10 500.01
<u>TEST & COMMISSION</u>				
59	Test and commission the Ventilation system.	Item		5 600.00
60	Ditto but in the presence of and to the entire satisfaction of the Consulting Engineer.	Item		7 500.00
<u>MAINTENANCE</u>				
61	Supply, delivery, installation, commissioning and 12 months maintenance of the following complete HVAC equipment with all mounting accessories as shown on the tender drawings:	Months	12	
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MECHANICAL INSTALLATION

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VENTILATION INSTALLATION

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MECHANICAL INSTALLATION
Bill No. 2
VENTILATION INSTALLATION

Item No		Quantity	Rate	Amount
	<u>BILL NO. 3</u>			
	<u>KITCHEN EQUIPMENT</u>			
	NOTE: Tenderers are referred to The HVAC Tender specification. The supply, delivery, installation and commissioning of equipment as shall be detailed in this schedule.			
	<u>Kitchen Canopy</u>			
	In line duct mounted fan installed complete with matching sound attenuators on either side of the fan.			
1	Diameter 710 Fan delivering 1980 l/s against 150 pa @ 1440rpm.	No	2	
	<u>Uninsulated galvanised steel sheet metal supply air ducting complete with support brackets.</u>			
	<u>450mm Diameter Ducting</u>			
2	Duct	m	30	
3	Duct with 45 degree cut-out and Vremin-proof wire mesh	No	7	
4	Canvass flexible	No	7	
5	Bend	No	7	
	<u>500mm Diameter Ducting</u>			
6	Duct	m	7	
7	Duct with 45 degree cut-out and Vremin-proof wire mesh	No	1	
8	Canvass flexible	No	2	
9	Bend	No	3	
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MECHANICAL INSTALLATION

Bill No. 3

KITCHEN EQUIPMENT

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Section No. 5
MECHANICAL INSTALLATION
Bill No. 3
KITCHEN EQUIPMENT

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Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 4</u></p> <p><u>FIRE PROTECTION</u></p> <p>NOTE: Tenderers are referred to The Technical specification for the Fire and Domestic water Reticulation. The supply, delivery, installation and commissioning of equipment as shall be detailed in this schedule.</p> <p><u>FIRE FIGHTING EQUIPMENT</u></p> <p><u>HOSE REEL</u></p> <p>Hose reel assembly with stationary type and rolling arrangement together with 19mm dia x 30 mtrs long hose and 6.25mm Plastic Red nozzle, and 25mm non-return shut-off valve at tap-off , hose reel shackle , HUV resistant hose reel cover etc., as per SANS 1086.</p> <p>Disc Diameter 575, Valve to be of 25mm BSP CP Hose reels with a wall mounting bracket are to serve each block as indicated to the tender drawing Jet length of 10m@0,2Mpa, 30l/min discharge rate @300kPa. Must be 250mm wall projection</p>			
1	30m Stationary Fire Hose Reel / fixed type	No	18	
	<p>Carried to Collection</p>		R	
	<p>Section No. 5 MECHANICAL INSTALLATION Bill No. 4 FIRE PROTECTION</p>			

CONDUIT PIPE

COMPLETE PIPING AND INSTALLATION ACCESSORIES

Supply, Erection, Testing and Commissioning of fire installation piping carried out of MS class C

Heavy duty pipe as per the relevant requirements of SANS 2001-DP2 or SANS 2001-DP6 and shall have a pressure rating of not less than 1 200 kPAa and above together with fittings, valves and accessories.

Work will include painting for the above ground piping with one coat of primer and two coat of enamel paint of approved colour. Work will include cleaning of pipe, degreasing, etc.

2	25mm NB pipe	m	90
3	32mm NB pipe	m	60
4	50mm NB pipe	m	120
5	80mm NB pipe	m	60
6	100mm NB pipe	m	150

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**Section No. 5
MECHANICAL INSTALLATION
Bill No. 4
FIRE PROTECTION**

FIRE EXTINGUISHERS

Supply, installation, testing and commissioning of approved make DCP and CO2 fire extinguishers, made of high pressure steel.

Supply and install in position approved make Fire Extinguisher of 5kg CO2 capacity complete made of high quality Aluminium with chromium plated gun discharging in 13 sec.

Maximum working pressure 174bar,with hose reel horn, to be placed on backing board well anchored hose which should have a minimum of bursting pressure of 200+/-15Bar

Supply and install in position approved make Fire Extinguisher of 4.5kg and 9kg capacity complete approved make Dry Chemical Powder Fire Extinguishers

1400kPa working pressure , burst pressure of > 5500 kPa mounted on backing boards,

7	4.5kg DCP fire extinguisher	No	124
8	9kg DCP fire extinguisher	No	4
9	5kg CO2 fire extinguisher	No	8
10	Complete inlet 2 x 65mm male instantaneous coupling double booster connector, rated 1980l/min working at 1200kPa, having a blanking cap and chain.	No	1
11	Complete 80mm Tamper proof brass hydrant and key, working pressure 16 bar, made in brass	No	1
12	Fire Standpipe 65mm Diameter with brass quick coupling valve	No	2
13	Fire Blanket	No	6

ACCESSORIES

14	Provision for a complete hybrid 20-30A megaphone	No	1
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MECHANICAL INSTALLATION
Bill No. 4
FIRE PROTECTION**

15	Complete fire motor siren, including installation/220V	No	1		
16	Supply and installation of all fire Signage(photoluminescent and screw type mounting (SABS approved)	No	120		
17	O&M manuals with Complete as built drawings	No	3		
18	Complete Fire stopping elements				SUM
19	Workshop drawings & Equipment Submissions				SUM
20	Commissioning and complete Fire installation testing				SUM
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MECHANICAL INSTALLATION

Bill No. 4

FIRE PROTECTION

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MECHANICAL INSTALLATION
Bill No. 4
FIRE PROTECTION

Item No		Quantity	Rate	Amount
	<u>BILL NO. 5</u>			
	<u>LP GAS INSTALLATION</u>			
	NOTE: Tenderers are referred to The Technical specification for the Fire and Domestic water Reticulation. The supply, delivery, installation and commissioning of equipment as shall be detailed in this schedule.			
	"Rate" includes material. delivery & installation labour.			
	<u>Nutrition Centre/Dinning Hall</u>			
	Schedule 40 black steel piping complete with fittings, brackets and welded joints.			
1	15mm diameter nominal bore	m	40	
2	22mm diameter nominal bore	m	30	
3	25mm diameter nominal bore	m	40	
	<u>LPG Gas Quality Isolating Valve</u>			
4	10mm diameter nominal bore	No	1	
5	25mm diameter nominal bore	No	10	
6	Low Pressure regulator	No	1	
	<u>LPG Gas Quality Flexible Hose Connector</u>			
7	10mm diameter nominal bore	No	1	
8	25mm diameter nominal bore	No	6	
	<u>Trunking</u>			
9	100 x 50 Epoxy powder coated trunking.	m	30	
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<u>Supply and Install 2x2 48kg LPG right and left Cylinders, Manifold and Ancillary Equipment as per Tender Drawing:</u>					
10	2x2 Cylinder Manifold		Item		31 000.00
11	Supply 48kg Cylinders		Item		38 000.00
<u>FITTINGS</u>					
<u>Reducers</u>					
12	25 -15 mm diameter nominal bore	No	20		
13	15 -10 mm diameter nominal bore	No	12		
<u>Bends</u>					
14	25 mm diameter nominal bore	No	20		
15	15 mm diameter nominal bore	No	10		
<u>Tees</u>					
16	25mm diameter nominal bore	No	12		
<u>Valve Box</u>					
Isolating valve box including valves, instrumentation, identification labelling, etc					
17	Valve Cabinets with one Diameter 25mm Isolating valve.	No	10		
<u>PRESSURE REGULATOR</u>					
<u>Supply, deliver, off-load, store on site and install First Stage Pressure regulator for a maximum gas</u>					
18	Demand of 750 000kJ/hr	No	1		
19	1800x800mm Steel Diamond Steel mesh hot dip galvanised locable cage/enclosure with roof, pad lock, no-unauthorised personnel, no-smoking sign, no cellphone sign		Item		12 000.00
Carried to Collection					
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<u>LABORATORY</u>					
<u>The supply, delivery, equipment as per the requirements of SANS 10087-1 for installation and commissioning of equipment as per the requirements of SANS 10087-1 for LPG gas installation</u>					
<u>Schedule 40 black steel piping complete with fittings, brackets and welded joints.</u>					
20	15mm diameter nominal bore	m	80		
21	25mm diameter nominal bore	m	60		
22	32mm diameter nominal bore	m	35		
<u>LPG Gas Quality Isolating Valve</u>					
23	15mm diameter nominal bore	No	35		
24	25mm diameter nominal bore	No	8		
25	32mm diameter nominal bore	No	8		
26	Low Pressure regulator	No	2		
<u>LPG Gas Quality Flexible Hose Connector</u>					
27	15mm diameter nominal bore	No	44		
28	10 mm diameter nominal bore	No	8		
<u>Trunking</u>					
29	100 x 50 Epoxy powder coated trunking.	m	90		
<u>Supply and Install 2x1 48kg LPG Cylinders left and right banks, Manifold and Ancillary Equipment as per</u>					
30	2 x1 Cylinder Manifold		Item		38 000.00
31	Supply 48kg Cylinders		Item		32 000.00
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44	Fix all gas cylinders against a rack(s) with individual safety chains for each cylinder.	Item	42 000.00
45	Pressure gauge	Item	49 000.00
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MECHANICAL INSTALLATION

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LP GAS INSTALLATION

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MECHANICAL INSTALLATION
Bill No. 5
LP GAS INSTALLATION

7	Drain piping	Item		3 000.00
8	Dial temperature gauge	Item		3 500.00
9	Painting and sealing	Item		15 000.00
	<u>Galvanised shelves</u>			
10	3 tier	Item		17 300.00
11	2 tier	Item		6 750.00
12	Cold room Lighting	Item		1 350.00
	<u>Electrical Installation</u>			
13	Electrical installation for above equipment from Local isolator to equipment		SUM	
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	COLD ROOM SYSTEM			

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Bill No. 6

COLD ROOM SYSTEM

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MECHANICAL INSTALLATION
Bill No. 6
COLD ROOM SYSTEM

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 7</u>			
	<u>HOT WATER RETICULATION</u>			
	NOTE: Tenderers are referred to The Technical specification for the Fire and Domestic water Reticulation. The supply, delivery, installation and commissioning of equipment as shall be detailed in this schedule.			
	<u>COPPER PIPE</u>			
	Class 0 copper water piping in accordance with SANS 460 installed complete with short lengths, cutting, plain couplings, capillary solder and jointing strictly in accordance with the Manufacturer's instructions, support brackets etc.			
	<u>Pipe lengths</u>			
	Including hangers, brackets, welding, mountings, flanges, gaskets, connectors, bolts, nuts, washers, anchors, joining connectors, etc.			
1	15mm Diameter	m	195	
2	22mm Diameter	m	455	
3	28mm Diameter	m	30	
	<u>Bends</u>			
	Including hangers, brackets, welding, mountings, flanges, gaskets, etc.			
4	15mm Diameter	No	90	
5	22mm Diameter	No	120	
6	28mm Diameter	No	1	
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	<u>Pipe Insulation (Exposed piping)</u>				
	25 mm thick snap-on preformed glass fibre insulation with a density of 80 kg/m ³ and covered with 0.5mm thick galvanised sheet metal cladding.				
27	25mm Diameter	m	40		
28	22mm Diameter	m	40		
29	28mm Diameter	m	15		
	Insulation to fittings (plastered finish) including T's bends, reducers, valves, etc.				
30	22mm Diameter	No	108		
31	28mm Diameter	No	24		
	<u>Pipe hangers</u>				
	Complete with angle irons, hangers, rods, chains/rods, brackets, anchors/fasteners, welding, mountings, flanges, gaskets, bolts, nuts, washers, etc.				
	<u>Pipe hangers:(Ceiling or Truss Mounted)</u>				
32	108 to 15mm Diameter Two Pipe Support.	No	52		
33	108 to 15mm Diameter Single Pipe Support.	No	10		
	<u>Solar Preheater for Electrical Geyser</u>				
	The Solar hot water heating systems or pre-heaters must be of the split, indirect heating thermo-syphon type complete with expansion tanks				
34	150 Liter	No	5		
35	Adjustable inclined roof Mounting Bracket set at 36 degree to the horizontal and facing North	No	5		
	<u>Electrical Geyser</u>				
36	50 Litre (2 kW Electrical Element)	No	1		
37	150 Litre (2 kW Electrical Element)	No	10		
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MECHANICAL INSTALLATION

Bill No. 7

HOT WATER GENERATION & DISTRIBUTION

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MECHANICAL INSTALLATION

Bill No. 7

HOT WATER GENERATION & DISTRIBUTION

Item No		Quantity	Rate	Amount
	<u>BILL NO. 8</u>			
	<u>COLD WATER RETICULATION</u>			
	NOTE: Tenderers are referred to The Technical specification for the Fire and Domestic water Reticulation. The supply, delivery, installation and commissioning of equipment as shall be detailed in this schedule.			
	<u>COPPER PIPE</u>			
	Class 0 copper water piping in accordance with SANS 460 installed complete with short lengths, cutting, plain couplings, capillary solder and jointing strictly in accordance with the specification for Wet service, support brackets and all necessary appurtenances for a complete installation			
	<u>Pipe lengths:</u>			
	Including hangers, brackets, jointing, joining connectors, etc. Piping to be extruded complete with colour coding as per Gauteng DID Specifications			
1	15mm Diameter	m	250	
2	22mm Diameter	m	210	
3	28mm Diameter	m	155	
4	35mm Diameter	m	40	
5	42mm Diameter	m	10	
6	54mm Diameter	m	50	
	<u>Bends:</u>			
	Including hangers, brackets, jointing, joining connectors, etc. Piping to be extruded complete with colour coding as per Gauteng DID Specifications			
7	15mm Diameter	No	550	
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	<u>Isolating valves:</u>				
	Ball type Isolating Valve complete with couplings to piping, etc., all strictly in accordance with Manufacturer's instructions and complying to SANS 1056 - 3				
24	15mm Diameter	No	240		
25	22mm Diameter	No	145		
26	28mm Diameter	No	45		
27	35mm Diameter	No	5		
28	42mm Diameter	No	5		
29	54mm Diameter	No	140		
	<u>Flexible Connection:</u>				
30	Flexible braided connection 15mm dia [300mm long]	No	95		
	<u>Pipe hangers:</u>				
	<u>Complete with angle irons, hangers, rods, chains/rods, brackets, anchors/fasteners, welding, mountings, flanges, gaskets, bolts, nuts, washers, etc.</u>				
	<u>Pipe hangers:(Ceiling or Truss Mounted)</u>				
31	54 to 15mm Diameter Three Pipe Support.	No	95		
	<u>Cable tray for pipe including installation, complete with 41mm galvanised uni-strut type channel and 10mm galvanised threaded rods.</u>				
32	300x100	m	300		
33	150x100	m	50		
	<u>Isolation Valves: Gate type valve</u>				
34	15mm Diameter	No	25		
35	22mm Diameter	No	20		
36	28mm Diameter	No	40		
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37	35mm Diameter	No	45		
	<u>Non Return Valve</u>				
38	22mm Diameter	No	15		
39	28mm Diameter	No	22		
40	35mm Diameter	No	20		
	<u>Pressure Reducing Valve</u>				
41	22mm Diameter	No	1		
42	28mm Diameter	No	1		
43	100mm Diameter	No	1		
	<u>Under ground piping connections to ring Main Connection to site water reticulation PVC Piping</u>				
	Including jointing, joining connectors, etc. Piping to be extruded complete with colour coding as per Gauteng DID Specifications				
44	22mm Diameter	m	210		
45	28mm Diameter	m	155		
46	35mm Diameter	m	20		
47	42mm Diameter	m	10		
	<u>Bends:</u>				
	Including jointing, joining connectors, etc. as per Gauteng DID Specifications				
48	22mm Diameter	No	140		
49	28mm Diameter	No	165		
50	35mm Diameter	No	90		
51	42mm Diameter	No	45		
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MECHANICAL INSTALLATION

Bill No. 8

COLD WATER RETICULATION

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MECHANICAL INSTALLATION

Bill No. 8

COLD WATER RETICULATION

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 9</u></p> <p><u>PLUMBING AND DRAINAGE (PROVISIONAL)</u></p> <p>NOTE: Tenderers are advised to study the Model Preambles for "Specification of materials and method to be used - General Specification for building contracts standard conditions." (GP ASC Rev 0) Items, materials or methods to be used names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the principal agent.</p> <p><i>Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 146 and 148 for CPAP purposes.</i></p> <p><u>uPVC pressure pipes and fittings</u></p> <p>Pipes for water supply shall be of the class described. Pipes of 40mm diameter and smaller shall solvent welded uPVC loose sockets and fittings. Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.</p> <p><u>Copper pipes</u></p> <p>Pipes shall be carbon free and of hard drawn Class O as manufactured by "Maksal". Pipes shall not be bent. Fittings to copper pipes shall be "Cobra Watertech" type capillary solder fittings. Capillary solder fittings shall comply with ISO 2016. Copper pipes are to be installed in accordance with the latest revision of the code of Practice for Copper Plumbing soldering techniques. Flux, solder, etc to be strictly in accordance with the manufacturer's requirements with special attention to copperflux composition</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 5 MECHANICAL INSTALLATION Bill No. 9 DRAINAGE</p>			<p style="text-align: right;">R</p>

Galvanised steel pipes and fittings

Galvanised steel pipes are to be "Tosa" medium class to SABS 62 and fittings are to be manufactured by "Tupy"

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameter not exceeding 60 mm only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60 mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained

Disinfection of water pipework

All pipework is to be disinfected in accordance with SABS 1

General

Descriptions of pipes laid in and including trenches, inspection chambers, french drains, septic tanks, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 93% Modified AASHTO density and disposal of surplus material.

Descriptions of copper service pipes and flexible connecting pipes shall include connections to taps, cisterns, etc and to steel pipes.

Descriptions of wc pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors separately measured)

WASTE UNIONS ETC

Waster Unions

1	32mm chrome plated basin waste union with backnut, plug and chain.	No	180
2	38mm Urinal waste union with backnut	No	40
3	50mm laboratory sink standard acid resistant waste pipe with a rubber plug	No	35

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MECHANICAL INSTALLATION
Bill No. 9
DRAINAGE**

4	50mm laboratory sink standard acid resistant overflow pipe	No	35		
<u>TRAPS ETC</u>					
<u>Traps</u>					
5	50mm Deep seal "P" or "S" trap	No	40		
6	32-50mm Butyl rubber deep seal P or S trap	No	160		
7	50-50mm Butyl rubber deep seal P or S trap	No	15		
8	50 x 300mm Butyl rubber combination for double bowl and with two deep seal P traps	No	25		
9	32-40mm Chromium plated bottle trap	No	25		
10	40-40mm Chromium plated bottle trap	No	10		
11	110mm dia P-trap right or left outlet	No	60		
12	110mm dia P-trap left or right or rear outlet	No	60		
13	Bottle Traps or other approved	No	150		
14	32mm '345/40' Chrome plated bottle trap	No	60		
<u>Brass</u>					
15	40mm Shower trap including stainless steel grating	No	40		
<u>VALVES</u>					
<u>Isolation valves</u>					
16	15mm	m	88		
17	22mm	m	160		
18	32mm	m	160		
<u>SANITARY PLUMBING</u>					
<u>uPVC pipes</u>					
19	40mm Pipes	m	80		
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20	50mm Pipes	m	200		
21	110mm Pipes laid in and including trenches not exceeding 1m deep under surface beds	m	350		
	<u>Extra over uPVC pipes for uPVC fittings</u>				
22	50-50mm Coupling	No	120		
23	40mm Bend	No	120		
24	50 mm Tee	No	60		
25	50mm Bend	No	88		
26	40mm Acess bend	No	46		
27	50mm Acess bend	No	125		
28	110mm Acess bend with ventilation horn	No	80		
29	50mm Acess junction	No	65		
30	110mm Acess junction	No	50		
31	110mm Straight pan connector	No	50		
32	50mm "G.I. One way" vent valve	No	60		
33	100mm "G.I. One way" vent valve	No	24		
34	50 mm Strap-on-boss connector	No	250		
	<u>Floor drain</u>				
35	A complete 40mm side outlet wet floor drain with 75mm water trap & white ABS plastic grate.	No	880		
	<u>Sundries</u>				
36	Testing waste pipe system			SUM	
	<u>NON PORTABLE WATER SUPPLIES</u>				
	<u>Class O copper pipes with capillary couplings</u>				
37	15mm Pipes	m	95		
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Bill No. 9
DRAINAGE

Item No		Quantity	Rate	Amount
	<u>BILL NO. 10</u>			
	<u>WATER SITE RETICULATION</u>			
	NOTE: Tenderers are referred to The Technical specification for the Fire and Domestic water Reticulation. The supply, delivery, installation and commissioning of equipment as shall be detailed in this schedule.			
	<u>FIRE WATER</u>			
	<u>Site reticulation and hydrant</u>			
1	Supply and Install 110mm PVC pipe as per site drawing	m	300	
2	Supply and Install 100 mm non-return valve	No	4	
3	Excavation of Trench and back filling with imported material	m	250	
	<u>Extra Over for Fittings</u>			
4	110mm bend	m	50	
5	110mm Tee	m	50	
6	65mm bend	No	50	
7	65mm Tee	No	50	
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<u>DOMESTIC WATER</u>			
<u>Water Supplies</u>			
8	Excavate for main supply line	m	300
9	Supply and installation 110mm PVC piping main supply line	m	250
10	Testing of water line		Item
<u>Extra Over for Fittings</u>			
11	110mm bend	No	30
12	110mm Tee	No	30
13	65mm bend	No	60
14	65mm Tee	No	60
<u>FLUSHING & IRRIGATION WATER</u>			
<u>Supply, deliver to site and installation of the Flushing water ring main, consisting of running supply lines to the building entry points and ring main supply and install PVC piping</u>			
15	110mm	m	280
16	65mm	m	120
17	50mm	m	55
18	32mm	m	250
19	28mm	m	90
20	22mm	m	150
21	15mm	m	200
22	12mm	m	100
<u>Extra Over for Fittings</u>			
23	110mm bend	No	20
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MECHANICAL INSTALLATION

Bill No. 10

WATER SITE RETICULATION

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MECHANICAL INSTALLATION
Bill No. 10
WATER SITE RETICULATION

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Item No		Quantity	Rate	Amount
	<u>BILL NO. 11</u>			
	<u>PUMP STATIONS</u>			
	NOTE: Tenderers are referred to The Technical specification for the Fire and Domestic water Reticulation. The supply, delivery, installation and commissioning of equipment as shall be detailed in this schedule.			
	<u>Dual Booster Pump set complete with control Panel for Irrigation & flushing water.</u>			
1	2.4 l/s @ 100m Wg in line variable speed pumps. Irrigation and Flushing Water	No	2	
	<u>Isolation Valves: Gate type valve</u>			
2	25mm Diameter	No	4	
3	65mm Diameter	No	12	
4	100mm Diameter	No	9	
	<u>Non Return Valve</u>			
5	65mm Diameter	No	12	
6	100mm Diameter	No	2	
	<u>Strainers</u>			
7	65mm Diameter	No	14	
8	100mm Diameter	No	4	
	<u>Union</u>			
9	25mm Diameter	No	8	
10	65mm Diameter	No	12	
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11	100mm Diameter	No	15		
	<u>Air Relief Valve</u>				
12	25mm Diameter	No	12		
	<u>Pressure Relief Valve / Safety Valve</u>				
13	100mm Diameter	No	1		
	<u>Ball Float Valve</u>				
14	100mm Diameter	No	3		
	<u>Pressure Gauge</u>				
15	100mm Diameter dial Glycerine filled pressure gauge	No	10		
	<u>Expansion Tank</u>				
16	200 L expansion tank	No	1		
	<u>Irrigation Water Control panel</u>				
17	Pump control panel with, 24 hr toggles switch, manual pump selection, Main circuit breaker, Active pump indicator LED, Line pressure activation, reservoir level de-activation.	No	1		
	<u>Interconnecting Piping</u>				
	Medium class galvanized mild steel piping in accordance with SANS 10400 installed complete with short lengths, cutting, plain couplings band jointing strictly in accordance with the Manufacturer's instructions.				
	<u>Piping</u>				
18	100mm Diameter	m	46		
19	65mm Diameter	m	12		
	<u>Bends</u>				
20	Extra on galvanised mild steel pipework for dia 100	m	12		
21	Extra on galvanised mild steel pipework for dia 65	m	12		
	Carried to Collection				
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Section No. 5

MECHANICAL INSTALLATION

Bill No. 11

PUMP STATIONS

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MECHANICAL INSTALLATION
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	<u>BILL NO.1</u>			
	<u>BULK EXCAVATIONS</u>			
	<u>PREAMBLES</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.			
	<u>Reference to drawings and details:</u>			
	Where drawings and/ or details have been referred to in the description of items the Tenderers should price for complete detail and specification on such details and/ or drawing. No claims relating to the omissions on the part of tenders will be entertained.			
	<u>EARTHWORKS</u>			
	<u>(CPAP Work Group No. 104 Unless Otherwise Stated)</u>			
	<u>Site Clearance</u>			
1	Allow for clearing the site of all shrubs and trees not exceeding 200mm girth, rubbish, debris, vegetation, drains, etc, that may be encountered and roughly level site.	m2	32 892	
2	Rip, scarify and compact ground 150mm average to 93% Mod AASHTO density.	m2	592	
3	Excavate in earth average 200mm deep over site to remove topsoil and deposit in spoil heaps on site.	m2	20 122	
	<u>Excavation in earth not exceeding 2 000mm deep to reduce levels:</u>			
4	To reduce level to final levels under floors, etc.	m3	16 853	
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	BULK EARTHWORKS			

5	Trenches.	m3	21		
6	Bases.	m3	66		
7	Holes.	m3	5		
	<u>Extra over reducing levels, trench and hole excavations in earth for excavation in:</u>				
8	Soft rock.	m3	1 679		
9	Hard rock.	m3	704		
	<u>Extra over all excavations for carting away:</u>				
10	Surplus material from excavations, stock piles e.t.c to a dumping site to be located by the contractor.	m3	14 617		
	<u>Risk of Collapse:</u>				
11	Sides of trenches and holes not exceeding 1 500mm deep.	m2	457		
	<u>Keeping excavations free of water:</u>				
12	Keeping excavations free of water.		Item		
	<u>SOIL POISONING</u>				
	<u>SABS approved brand of anti-termite soil poison in accordance with SANS 5859 applied by a Registered Pest Control Company and guaranteed against termite infestation for ten (10) years:</u>				
13	To bottoms and sides of trenches, holes, e.t.c	m2	499		
	<u>EARTH FILLING, ETC.</u>				
	<u>Earth filing obtained from excavations, prescribed stock piles, e.t.c on site compacted to 95% Mod AASHTO density:</u>				
14	Backfilling to trenches, holes, e.t.c.	m3	7		
	<u>Rip and Compact in-situ roadbed to 93% Mod AASHTO density:</u>				
15	Over site to form platforms.	m3	999		
	Carried to Collection				
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Section No. 6

EXTERNAL WORKS

Bill No. 1

BULK EARTHWORKS

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EXTERNAL WORKS

Bill No. 1

BULK EARTHWORKS

Item No		Quantity	Rate	Amount
	<p><u>BILL NO.2</u></p> <p><u>WALKWAYS, PARKING AND ASSEMBLY AREA</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p>NOTE: Any defects which may become evident due to bad workmanship or materials within six months of completion shall be made good by the Contractor at his own expense.</p> <p><u>Reference to drawings and details:</u></p> <p>Where drawings and/ or details have been referred to in the description of items the Tenderers should price for complete detail and specification on such details and/ or drawing. No claims relating to the omissions on the part of tenders will be entertained.</p> <p><u>EARTH FILLING, ETC.</u></p> <p><u>Coarse river sand filling supplied by the contractor:</u></p>			
1	Under surface beds to form sand blinding.	m3	371	
	<p><u>Compaction of surfaces:</u></p>			
2	Compaction of ground surface under walkways, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material from excavated material where necessary and compacting to 93% Mod AASHTO density.	m2	12 355	
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	<p>Section No. 6 EXTERNAL WORKS Bill No. 2 WALKWAYS, PARKING AND ASSEMBLY AREA</p>			

<u>DAMPPROOFING OF WALLS AND FLOORS</u>				
<u>One layer of 250 micron green polyethylene damp proof membrane (as per clause 7.2 of specification SABS-0400), all side overlaps sealed with approved contact adhesive</u>				
3	Under surface beds.	m2	12 355	
<u>BOND AND INTERLOCKING CONCRETE PAVERS.</u>				
<u>Plain Precast Cement Concrete (25MPa) Type SA Interlocking Bond Paving Bricks Size 200 x 100 Laid On And Including 50mm Thick Sand Bed With Joints Filled With Sand:</u>				
4	65mm Interlocking block type S-A with compressive strength of 25Mpa in Herringbone pattern 45 degree to kerb including 50mm sand blinding layer approved by Engineer (Including all cutting of blocks and sand infill).	m2	5 317	
5	80mm Interlocking block type S-A with compressive strength of 25Mpa in Herringbone pattern 45 degree to kerb including 25mm bedding layer of thin, clean, silt free commercial coarse river sand approved by Engineer (Including all cutting of blocks and sand infill).	m2	8 274	
<u>PRE-CAST CONCRETE KERBS</u>				
<u>Pre-cast concrete kerbs (complying with SABS 927) in maximum lengths of 1m lengths, wet presses, placed in position, bedded and jointed in (3:1) cement mortar and flush pointed on exposed faces, including 15MPa/19mm unreinforced concrete haunching at the back of each joint, excavation, backfilling, ramming, etc.:</u>				
6	75mm x 250mm high overall, laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course.	m	23 393	
7	75mm x 250mm High Kerbs circular on plan not exceeding 4 000mm radius formed with 330mm lengths of straight kerb.	m	265	
8	10mm x 250mm High Edge Beam Barrier Kerb	m	468	
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PAINTWORK

Prepare and apply one coat white reflective road marking paint on pre-cast concrete paving blocks , etc.:

9	100mm Wide white line	m	384
10	100mm Wide yellow line	m	120
11	Paraplegic parking sign in parking area	No	8
12	Paraplegic ramp markings (Yellow and White) in parking area	m2	67

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**Section No. 6
EXTERNAL WORKS
Bill No. 2
WALKWAYS, PARKING AND ASSEMBLY AREA**

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EXTERNAL WORKS

Bill No. 2

WALKWAYS, PARKING AND ASSEMBLY AREA

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EXTERNAL WORKS

Bill No. 2

WALKWAYS, PARKING AND ASSEMBLY AREA

Item No		Quantity	Rate	Amount
	<p><u>BILL NO.3</u></p> <p><u>LANDSCAPING</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>Reference to drawings and details:</u></p> <p>Where drawings and/ or details have been referred to in the description of items the Tenderers should price for complete detail and specification on such details and/ or drawing. No claims relating to the omissions on the part of tenders will be entertained.</p> <p><u>SOFT LANDSCAPING</u></p> <p><u>Ground preparation:</u></p> <p><u>Trees:</u></p> <p><u>The tenderer is to allow in his price for watering all newly planted trees twice a week for the first three months.</u></p>			
1	Securinega virosa (White Berry Bush), including planting, fertilizing, staking, mulching and watering, all by a specialist subcontractor or nursery.	No	40	
	<u>Shrubs:</u>			
2	Securinega virosa (White Berry Bush), including planting, fertilizing, staking, mulching and watering, all by a specialist subcontractor or nursery.	m2	175	
3	Elegia Tectorum, including planting, fertilizing, staking, mulching and watering, all by a specialist subcontractor or nursery.	m2	90	
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LANDSCAPING

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Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 4</u></p> <p><u>FENCING AND ENTRANCE WALL</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>Reference to drawings and details:</u></p> <p>Where drawings and/ or details have been referred to in the description of items the Tenderers should price for complete detail and specification on such details and/ or drawing. No claims relating to the omissions on the part of tenders will be entertained.</p> <p><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></p> <p><u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></p> <p><u>10MPa/20mm concrete:</u></p>			
1	Surface Blinding.	m3	5	
	<p><u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></p> <p><u>25MPa/19mm Concrete:</u></p>			
2	Strip footings.	m3	7	
3	Bases.	m3	49	
	Carried to Collection			
	<p>Section No. 6 EXTERNAL WORKS Bill No. 4 FENCING AND ENTRANCE WALLS</p>			
				R

<u>TESTS CUBES</u>			
<u>Concrete test cubes:</u>			
4	Set of three concrete test cubes size 150mm x 150mm x 150mm overall including testing.	Sets	12.0
<u>REINFORCEMENT</u>			
<u>High Tensile Steel Bar Reinforcement To Structural Concrete Work:</u>			
5	Various sizes.	t	4.91
<u>BRICKWORK IN FOUNDATIONS</u>			
<u>Brickwork of NFP bricks (14 MPa nominal compressive strength) in class I mortar:</u>			
6	Piers.	m3	2
7	One brick wall.	m2	15
<u>BRICKWORK IN SUPERSTRUCTURE</u>			
<u>Brickwork of NFP bricks (14 MPa nominal compressive strength) in class I mortar:</u>			
8	Piers.	m3	3
9	One brick wall.	m2	24
<u>BRICKWORK SUNDRIES</u>			
<u>Cement infill of 1:3 liquid cement and sand mixture:</u>			
10	To brick piers.	m3	5
<u>2,5mm Galvanised brick reinforcement:</u>			
11	75mm Wide reinforcement built in horizontally in foundations.	m	21
12	75mm Wide reinforcement built in horizontally superstructure.	m	53
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<u>FENCING</u>				
<u>'ClearVu' fencing system or Equally Approved to match existing:</u>				
20	High density anti-climbing and anti-cut pressed mesh panel fencing 2 400mm high, with 600mm Anti Burrow extension formed of 4mm diameter horizontal and 4mm diameter vertical high tensile wires galvanised with marine fusion bond coating, colour to Architect's specification, with aperture size 76.2mm x 12.7mm and reinforcing V-section ribs, bolted with vandal resistant bolts and clamping plates to 85-4mm taper locking posts 3m high including locking recess mechanism at 3,382m centres with sealed base anchors with posts bedded in 25MPa concrete bases size 400mm x 400mm x 600mm deep, complete installation in accordance with the manufacturer's specifications.	m	888	
21	Extra over for 1000mm x 2400mm high single swing gate comprising 60mm x 60mm square tube frame with welded ClearVu in-fill.	No	1	
22	Extra over for 4000mm x 2400mm high double swing gate comprising 60mm x 60mm square tube frame with welded ClearVu in-fill.	No	1	
23	Extra over for 1000mm high galvanised 'Shark tooth' type spikes rails with marine fusion bond coating, bolted to 50mm wide ClearVu mesh flange bent along fence top, complete installation in accordance with the manufacturer's specifications.	m	888	
<u>Two coats bituminous emulsion to metal surfaces applied on both sides over the full flat area:</u>				
24	600mm High Anti Burrow ClearVu extension	m	888	
<u>Miscellaneous:</u>				
25	50mm Union padlock with 3 keys, 7mm boron steel shackle, double locking, brass body with satin nickel finish suitable for high security applications and outdoor use. Tested to 240 hours for corrosion resistance and 10 000 opening/closing cycles with 5 pin cylinder.	No	2	
<u>Signage:</u>				
26	550mm x 350mm x 3mm Thick aluminium sign with anodised silver engraved text to Architect's detail.	No	1	
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FENCING AND ENTRANCE WALLS				

27 5mm Black perspex lettering spelling "THABOTONA
PRIMARY SCHOOL" fixed 5mm off wall with chemical
bonding to Architect's specification.

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FENCING AND ENTRANCE WALLS

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FENCING AND ENTRANCE WALLS

6	450mm Pipes laid in and including trenches exceeding 1 000mm and not exceeding 2 000mm deep.	m	46		
7	525mm Pipes laid in and including trenches exceeding 1 000mm and not exceeding 2 000mm deep.	m	16		
8	600mm Pipes laid in and including trenches exceeding 1 000mm and not exceeding 2 000mm deep.	m	64		
9	750mm Pipes laid in and including trenches exceeding 1 000mm and not exceeding 2 000mm deep.	m	38		
10	825mm Pipes laid in and including trenches exceeding 1 000mm and not exceeding 2 000mm deep.	m	44		
	<u>Manhole including excavation, imported backfill compacted to 90% Mod AASHTO, 20MPa 200mm thick concrete base with two layers of mesh Ref 395, 15MPa mass concrete benching for 110mm Diameter pipes to 250mm thick, walls formed of 'ROCLA' or similar approved pre-cast manhole chambers, all manhole joints to be sealed with 'DENSO' sealstrip or similar approved, 4A replacement cover/adaptor slab concrete lid can fit this slab directly (gratings and covers elsewhere):</u>				
11	1830mm x 1500mm Manhole chambers not exceeding 1100mm deep internally.	No	11		
12	1830mm x 1500mm Manhole chambers exceeding 1100mm and not exceeding 1600mm deep internally.	No	2		
	<u>Grid inlet including excavation, imported backfill compacted to 90% Mod AASHTO, 20MPa 200mm thick concrete base with two layers of mesh Ref 395, 15MPa mass concrete benching for 110mm Diameter pipes to 250mm thick, walls formed of 'ROCLA' or similar approved pre-cast manhole chambers, all manhole joints to be sealed with 'DENSO' sealstrip or similar approved, 4A replacement cover/adaptor slab concrete lid can fit this slab directly (gratings and covers elsewhere):</u>				
13	1830mm x 1500mm Brick catch pit not exceeding 1100mm deep internally.	No	11		
14	1830mm x 1500mm Brick catch pit exceeding 1100mm and not exceeding 1600mm deep internally.	No	2		
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<u>Cast iron gratings, covers, etc.:</u>					
15	'Saint Gobain' or equally approved 550mm diameter 2A cast iron manhole cover and frame. (SKU: 023634).	No	13		
16	'Saint Gobain' or equally approved 450mm x 600mm PAM cast iron storm water grate and frame. (SKU: 022510).	No	13		
17	Lifting-key for manhole cover (handed to employer).	No	6		
<u>STORMWATER CHANNELS</u>					
<u>Pre-cast concrete 25Mpa/19 stone open storm water channels having half round shaped waterway formed in top, cast in suitable lengths including, bedding and pointing in (3:1) cement mortar:</u>					
18	'Valstone' or Similar Approved D11 large shallow open-ended channel section, size 660mm wide x 225mm thick with 140mm diameter half round channel waterway (Prod no.: P2-0609).	m	1 003		
19	Extra over for angle.	No	31		
20	Extra over for intersections.	No	10		
21	Extra over for junctions.	No	5		
<u>In-situ concrete 25Mpa/19 stone open stormwater channels having trapezoidal shaped waterway formed in top, finished smooth on all exposed surfaces in (3:1) untinted cement plaster trowelled smooth and with angles rounded and, cast in suitable lengths, including all formwork, moulds, shallow excavation, 150mm selected gravel filling compacted to 95% Mod AASHTO density and ramming, laying to falls, forming construction joints at maximum 3m, bedding and pointing in (3:1) cement mortar:</u>					
22	Channel size 1500mm wide x 100mm thick with 500mm deep trapezoidal shaped channel waterway.	m	10		
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<u>JOINT SEALANTS, ETC.</u>					
<u>Two-part polysulphide sealing compound including backing cord, bond breaker, primer, e.t.c.:</u>					
23	10mm x 20mm In-between channels including raking out expansion joint filler as necessary.	m	2 014		
<u>DAMPPROOFING OF WALLS AND FLOORS</u>					
<u>One layer 250 micron embossed polyethylene dampproof course (SANS 952-1985 type B) or similar approved:</u>					
24	Under 660mm wide channels, with 150mm turn up against brick walls.	m2	662		
<u>HEADWALLS, ETC.</u>					
<u>Stormwater channel outlets:</u>					
25	Irregular shaped headwall as channel outlet size 4 460mm wide x 2280mm long x 900mm high formed of 150mm 30MPa concrete wingwall resting on reinforced concrete slab overall size 2430mm x 4160mm x 150mm thick, including 400mm diameter encased stormwater pipe (elsewher measured) as per headwall details.	No	2		
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STORMWATER DRAINAGE

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STORMWATER DRAINAGE

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	<p><u>BILL NO. 6</u></p> <p><u>SOIL DRAINAGE</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>Reference to drawings and details:</u></p> <p>Where drawings and/ or details have been referred to in the description of items the Tenderers should price for complete detail and specification on such details and/ or drawing. No claims relating to the omissions on the part of tenders will be entertained.</p> <p><u>SOIL DRAINAGE, ETC.</u></p> <p>Excavations of pipe trenches will be measured in accordance with "Method B" and the width of excavations in more difficult material will be determined in accordance with "Method A" of the Standard System of Measuring Building Work Six Edition</p> <p><u>Heavy duty (Class 34) uPVC sewer and drain pipes, including 650mm wide trenches, 110mm thick sand bedding, imported fill compacted to 95% Mod AASHTO density match ground levels:</u></p>			
1	110mm Pipes laid in and including trenches not exceeding 1 000mm deep.	m	531	
2	110mm Pipes laid in and including trenches exceeding 1 000mm and not exceeding 2 000mm deep.	m	186	
3	110mm Pipes laid in and including trenches exceeding 2 000mm and not exceeding 3 000mm deep.	m	8	
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<p><u>Extra over 110mm pipes laid in for 25MPa concrete encasing 310mm Diameter around pipe at maximum 45 degree angles including setting in 45 Degree junction, to maximum depth of 2000mm:</u></p>					
4	Unreinforced concrete encasing to 110mm horizontal and sloping pipes.	m3	116		
<p><u>Extra over heavy duty (Class 34) uPVC sewer and drain pipes for fittings:</u></p>					
5	110mm Bend.	No	15		
6	110mm Junction.	No	1		
7	110mm Access rodding eye.	No	16		
<p><u>Gulleys:</u></p>					
8	190mm x 110mm Gully head and Gate.	No	25		
9	110mm Gully 'P' trap.	No	25		
10	110mm 45 Degree cast iron rodding eye and cover.	No	16		
11	110mm 45 Degree junction.	No	6		
<p><u>Manhole including excavation, imported backfill compacted to 90% Mod AASHTO, 20MPa 200mm thick concrete base with two layers of mesh Ref 395, 15MPa mass concrete benching for 110mm Diameter pipes to 250mm thick, walls formed of 'ROCLA' or similar approved pre-cast manhole chambers, all manhole joints to be sealed with 'DENSO' sealstrip or similar approved, 4A replacement cover/adaptor slab concrete lid can fit this slab directly (gratings and covers elsewhere):</u></p>					
12	1 000mm Diameter manhole drops exceeding 500mm and not exceeding 1 000mm deep internally.	No	17		
13	1 000mm Diameter manhole drops exceeding 1 000mm and not exceeding 1 500mm deep internally.	No	6		
14	1 000mm Diameter manhole drops exceeding 2 000mm and not exceeding 2 500mm deep internally.	No	9		
<p>Carried to Collection</p>					R
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SOIL DRAINAGE

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SOIL DRAINAGE

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	<u>BILL NO. 7</u>			
	<u>WATER RETICULATION</u>			
	<u>PREAMBLES</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.			
	<u>Reference to drawings and details:</u>			
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	<u>WATER SUPPLIES IN GROUND</u>			
	<u>Class N12.5 HDPe type IV pipes, including excavations and filling:</u>			
1	110mm Pipes laid in and including trenches not exceeding 1 000mm deep.	m	859	
2	110mm Pipes laid in and including trenches exceeding 1 000mm not exceeding 2 000mm deep.	m	152	
	<u>Extra over Class N12.5 HDPe type IV pipes for fittings, bends, junctions, reducing junctions, connectors, etc.:</u>			
3	110mm Fittings.	No	400	
	<u>Trust block including, setting in position in pipe tranches complete as per Engineers ...:</u>			
4	45 Degree Bend thrust block set in position.	No	16	
5	90 Degree Bend thrust block set in position.	No	4	
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	WATER RETICULATION			

6	T-Junction thrust block set in position. <u>Air Valve and pipe work complete as per Engineers.</u>	No	3		
7	Air Valve complete including piping and fittings. <u>Manhole chamber including excavation, imported backfill compacted to 90% Mod AASHTO, 20MPa 420mm x 100mm thick concrete footing, 100mm thick 19mm concrete stone filling, 220mm NFX Brickwork in class II mortar, bagging to internal walls, 30MPa 150mm reinforced concrete cover slabs with 40mm diameter pipe vent and setting in manhole cover frame into covers slab (cover and frame elsewhere):</u>	No	2		
8	1 580mm x 1 180mm Brick chamber not exceeding 100mm deep internally. <u>Cast iron gratings, covers, etc.:</u>	No	2		
9	'Saint Gobain' or Equally Approved 25.4kg 450mm x 600mm cast iron manhole cover and frame.	No	2		
10	Lifting-key for manhole cover (handed to employer). <u>Valves:</u>	No	1		
11	50mm Gate valve, two connectors, 200mm x 150mm x 300mm PVC valve box and cover, 100mm crush stone bed to box valve and additional pipe where needed, including excavation, setting in valve and filling around box valve with suitable material.	No	2		
12	50mm Isolation ball Valve, two connectors, 200mm x 150 mm x 300mm PVC valve box and cover, 100mm crush stone bed to box valve and additional pipe where needed, including excavation, setting in valve and filling around box valve with suitable material.	No	2		
13	50mm Non-return valve, two connectors, 200mm x 150mm x 300mm PVC valve box and cover, 100mm crush stone bed to box valve and additional pipe where needed, including excavation, setting in valve and filling around box valve with suitable material.	No	2		
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<u>TESTS, ETC.</u>			
<u>Prescribed Density Tests As Check On Contractors Tests Included In Filling Above</u>			
23	Modified AASHTO density test and deliver the results to the Engineer and Principal Agent within 24 hours of the tests being completed.	No	2
<u>SOIL POISONING</u>			
<u>SABS approved brand of anti-termite soil poison in accordance with SANS 5859 applied by a Registered Pest Control Company and guaranteed against termite infestation for ten (10) years:</u>			
24	Under floors, etc.	m2	42
25	To bottoms and sides of trenches, holes, e.t.c	m2	21
<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>			
<u>10MPa/20mm concrete:</u>			
26	Surface Blinding.	m3	1
<u>REINFORCED CONCRETE CAST ON FORMWORK</u>			
<u>30MPa/20mm concrete:</u>			
27	Surface beds on waterproofing including ground beams.	m3	10
28	Bases.	m3	4
<u>Finishing top surfaces of concrete smooth with a power float:</u>			
29	Surface beds, slabs, etc.	m2	42
<u>TESTS CUBES</u>			
<u>Concrete test cubes:</u>			
30	Set of three concrete test cubes size 150mm x 150mm x 150mm overall including testing.	Sets	6.0
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ROUGH FORMWORK

Rough formwork to sides:

31	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	28	
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MOVEMENT JOINTS ETC.

Saw cut joints ream out to 6mm x 20mm and sealed with 15mm x 6mm sikaflex-pro 2HP sealant on polychord backing strip

32	3.5mm x 30mm. saw cut joints on top of concrete	m	37	
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WATER RETICULATION

<u>REINFORCEMENT (PROVISIONAL)</u>				
<u>Fabric reinforcement:</u>				
33	Type 245 fabric reinforcement in surface beds, slabs etc.	m2	42	
<u>DAMPPROOFING OF WALLS AND FLOORS</u>				
<u>One layer of 250 micron green polyethylene damp proof membrane (as per clause 7.2 of specification SABS-0400), all side overlaps sealed with approved contact adhesive</u>				
34	Under surface beds.	m2	55	
<u>WATER TANKS, ETC.</u>				
<u>2 x 20000 Litre 'JoJo' or Equally Approved water tanks complete as per engineer's drawing no.: AE2211-C-SAN-202 WATER AND SEWER TYPICAL DETAILS Rev D:</u>				
35	Supply and fit 20kl water tank complete including pipework and fittings.	No	1	
<u>Supply and install Booster pumps, Pressure control valve complete, including unions and adaptors:</u>				
36	Centrifugal pump CM210, 2.2kw Booster Pump complete with volume (Q) of 20-120 litres/minute for minimum height of 33m, including concrete plinth, brickwork and cover lid.	No	1	
37	Submersible pump type v400, 5.5kw Pump with HP of 7.5, complete with concrete plinth, brickwork and cover lid.	No	1	
<u>Testing:</u>				
38	Allow for testing all drains, and water supplies to the satisfaction of the Principal Agent. All defective work is to be taken out and replaced at the Contractor's expense.			Item
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EXTERNAL WORKS

Bill No. 7

WATER RETICULATION

Item No		Quantity	Rate	Amount
	<u>BILL NO. 8</u>			
	<u>DRINKING FOUNTAINS</u>			
	<u>PREAMBLES</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.			
	<u>Reference to drawings and details:</u>			
	Where drawings and/ or details have been referred to in the description of items the Tenderers should price for complete detail and specification on such details and/ or drawing. No claims relating to the omissions on the part of tenders will be entertained.			
	<u>UNREINFORCED CONCRETE, CAST AGAINST EXCAVATED SURFACES</u>			
	<u>10MPa/20mm concrete:</u>			
1	Surface Blinding.	m3	4	
	<u>UNREINFORCED CONCRETE, CAST AGAINST PARTIALLY EXCAVATED SURFACES</u>			
	<u>25MPa/19mm Concrete:</u>			
2	Surface beds on waterproofing.	m3	8	
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	Section No. 6 EXTERNAL WORKS Bill No. 8 DRINKING FOUNTAINS			

<u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>			
<u>25MPa/19mm Concrete:</u>			
3	Bases.	m3	8
<u>CONCRETE SUNDRIES</u>			
<u>Finishing top surfaces of concrete smooth with a power float:</u>			
4	Surface beds, slabs, etc.	m2	60
<u>TESTS CUBES</u>			
<u>Concrete test cubes:</u>			
5	Set of three concrete test cubes size 150mm x 150mm x 150mm overall including testing.	Sets	21.0
<u>REINFORCEMENT (PROVISIONAL) (CPAP Work Group No. 114)</u>			
<u>High Tensile Steel Bar Reinforcement To Structural Concrete Work:</u>			
6	Various sizes.	t	0.17
<u>DAMPPROOFING TO WALLS AND FLOORS</u>			
<u>One layer of 375 micron embossed polyethylene dampproof course or similar approved:</u>			
7	In walls, under cills, etc.	m2	9
<u>One layer of 250 micron green polyethylene damp proof membrane (as per clause 7.2 of specification SABS-0400), all side overlaps sealed with approved contact adhesive</u>			
8	Under surface beds.	m2	60
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<u>JOINT SEALANTS, ETC.</u>					
<u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc.</u>					
9	Between timber or metal door or window frames and face brick / plaster reveal.	m	21		
<u>PLUMBING AND DRAINAGE</u>					
<u>Class 25D Precast RC pipe section with interlocking joints as per architects drawings.</u>					
10	1000mm diameter pipes.	m	23		
<u>TAPS VALVES, ETC.</u>					
<u>Taps, Valves, etc.:</u>					
11	'Walcro 109' or equally approved 15mm drinking fountain demand faucet tap (SKU: 003806).	No	38		
12	Cobra Star: 106-15 or Equally Approved bib tap with hot and cold indices. ½" BSP male inlet. SANS 226 TYPE 1.	No	19		
<u>Waste unions etc.:</u>					
13	40mm Chromium plated '316CP' sink waste union complete with plug and chain, or similar approved.	No	5		
<u>WATER SUPPLIES</u>					
<u>Class 1 copper pipes with brass compression fittings:</u>					
14	20mm Pipes cast in precast RC pipe.	m	95		
15	20mm Fittings.	No	190		
<u>uPVC Pipes:</u>					
16	100mm Pipes cast in precast RC pipe.	m	24		
17	100mm Fittings.	No	38		
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WATER SUPPLIES IN GROUND

Class N12.5 HDPe type IV pipes, including excavations and filling:

18	110mm Pipes laid in and including trenches not exceeding 1 000mm deep.	m	74
19	110mm Pipes laid in and including trenches exceeding 1 000mm not exceeding 2 000mm deep.	m	40

Extra over Class N12.5 HDPe type IV pipes for fittings, bends, junctions, reducing junctions, connectors, etc.:

20	110/20mm Fittings.	No	190
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DRINKING FOUNTAINS

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Bill No. 8

DRINKING FOUNTAINS

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 9</u></p> <p><u>SOCCER FIELD</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Reference to drawings and details:</u></p> <p>Where drawings and/ or details have been referred to in the description of items the Tenderers should price for complete detail and specification on such details and/ or drawing. No claims relating to the omissions on the part of tenders will be entertained.</p> <p><u>EARTH FILLING, ETC.</u></p> <p><u>Crusher run filling to assist in the sub-surface drainage:</u></p>			
1	Over site to form platforms.	m3	710	
	<u>Coarse river sand filling supplied by the contractor:</u>			
2	Under surface beds, slabs etc.	m3	473	
	<u>Compaction of surfaces:</u>			
3	Compaction of ground surface under platforms 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	4 731	
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	<p>Section No. 6 EXTERNAL WORKS Bill No. 9 SOCCER FIELD</p>			

<u>TESTS, ETC.</u>					
<u>Prescribed Density Tests As Check On Contractors Tests Included In Filling Above</u>					
4	Modified AASHTO density test and deliver the results to the Engineer and Principal Agent within 24 hours of the tests being completed.	No	26		
<u>GRASSING, ETC.</u>					
<u>Grassing, ground covers, etc:</u>					
5	Prepare topsoil and lay 50mm thick "Kikuyu" grass rolls.	m2	1 829		
6	Fertilising grassed areas with suitable fertiliser at a rate of 15.4g/m ² after completion of planting	m2	1 829		
<u>Maintenance:</u>					
7	Allow for maintaining soccer field for a period of 3 months, including watering, weeding, cutting, replacing, etc.			Item	
<u>PAINTWORK</u>					
<u>Prepare and apply one coat white reflective road marking paint on pre-cast concrete paving blocks , etc.:</u>					
8	100mm Wide white line	m	400		
<u>SUNDRIES</u>					
<u>Rugby Posts</u>					
9	10m Mild steel Rugby posts powder coated and painted to the approval of the Architect.	No	2		
<u>Soccer Goals</u>					
10	7.32m wide and 2.44m high with 2mm to 4mm mild steel, hot dip galvanized, to be set in concrete footing with back support net, to the approval of Architect	No	2		
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SOCCER FIELD

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Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 10</u></p> <p><u>COMBI COURTS</u></p> <p><u>PREAMBLES</u></p> <p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.</p> <p>NOTE: Any defects which may become evident due to bad workmanship or materials within six months of completion shall be made good by the Contractor at his own expense.</p> <p>-----</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Reference to drawings and details:</u></p> <p>Where drawings and/ or details have been referred to in the description of items the Tenderers should price for complete detail and specification on such details and/ or drawing. No claims relating to the omissions on the part of tenders will be entertained.</p> <p><u>EARTH FILLING, ETC.</u></p> <p><u>Compaction of surfaces:</u></p>			
1	<p>Compaction of ground surface under platforms etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density.</p>	m2	2 687	
	<p><u>Earth filling supplied by the contractor under combi courts:</u></p>			
2	<p>Sub-base course of suitable gravel/crusher run material compacted to 90% Mod AASHTO density</p>	m3	188	
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3	Base course of G1 graded 13mm crusher stone material, sprayed with bitumen SS60 compacted to 90% Mod AASHTO density	m3	126		
4	Base course of G1 grade 6.7mm stone material, sprayed with bitumen SS60 emulsion compacted to 90% Mod AASHTO density	m3	101		
<u>TESTS, ETC.</u>					
<u>Prescribed Density Tests As Check On Contractors Tests Included In Filling Above</u>					
5	Modified AASHTO density test and deliver the results to the Engineer and Principal Agent within 24 hours of the tests being completed.	No	28		
<u>WEED KILLERS, INSECTICIDES, ETC</u>					
<u>Combi Court Base to be treated with a SANS 10400 approved weed killer:</u>					
6	On base course	m2	1 256		
<u>DAMPPROOFING OF WALLS AND FLOORS</u>					
<u>One layer 200 micron embossed polyethylene dampproof course (SANS 952-1985 type B) or similar approved:</u>					
7	Under surface bed.	m2	2 687		
<u>COMBI COURT SURFACING</u>					
<u>Welded Mesh:</u>					
8	Bara Mesh	m2	1 256		
<u>Slurry Surfacing:</u>					
9	Slurry layer to be compacted to 90% Mod AASHTO density	m2	1 256		
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	<u>Reinforced 20Mpa/19mm Concrete cast on/in formwork:</u>				
10	Surface beds cast in panels with smooth top finish (elsewhere measured)	m3	126		
	<u>Finishing to surfaces of concrete smooth with a power float:</u>				
11	Surface beds, slabs, etc.	m2	1 256		
	<u>30mm Seamless Rubber Cushion Matting:</u>				
12	Glued on power floated concrete	m2	1 256		
	<u>Mastic Layers:</u>				
13	Apply 2 x colourless layers and 2 x colour layers to the approval of the Architect and/or Engineer	m2	1 256		
	<u>PAINTWORK</u>				
	<u>Prepare and apply paint lines to international standards with moisture and UV resistant paint:</u>				
14	Interior of the Court with Green	m2	1 256		
15	50 - 100mm Wide white line	m	208		
16	50 - 100mm Wide Red line on the Edge	m	208		
17	50 - 100mm Wide Yellow	m	208		
	<u>METALWORK</u>				
	<u>'Class A' Galvanised Fencing:</u>				
18	3600mm High Chain Link Galvanised Diamond Mesh size 100 x 50 x 2.5mm with vertical wires facing outwards including intermediate posts, corner posts, straining wires, 350 x 350 x 600mm mass concrete base, 450mm wide concrete base, etc. installed complete, and excavations for poles, holes etc. and, all complete, painted with Antique Green Gloss Enamel paint.	m	185		
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19	<p><u>'Class A' Galvanised Gates:</u></p> <p>Single leaf steel gate size 900mm wide x 2100mm high overall, formed of 50mm diameter x 2.5mm parameter framing and one diagonal brace, all scribed and welded at corners and intersections, covered with Galvanised Diamond Mesh, straining wires all as per fencing, including fitting with 30mm diameter x 300mm girth u-shaped cleats and three 24mm diameter x 300mm long eye bolt hinges bolted and welded to adjoining 100mm diameter gate post (elsewhere measured), including 500mm long heavy duty chain spot welded to gate and Union padlock.</p>	No	2		
	<p><u>BOND AND INTERLOCKING CONCRETE PAVERS</u></p>				
	<p><u>Plain Precast Cement Concrete (25MPa) Type SA Interlocking Bond Paving Bricks Size 200 x 100 x 60mm Thick Laid On And Including 30mm Thick Sand Bed With Joints Filled With Sand:</u></p>				
20	<p>60mm Interlocking block type S-A with compressive strength of 25Mpa in Herringbone pattern 45 degree to kerb including 25mm bedding layer of thin, clean, silt free commercial coarse river sand approved by Engineer (Include all cutting of blocks and sand infill).</p>	m2	1 430		
	<p><u>PRE-CAST CONCRETE KERBS</u></p>				
	<p><u>Pre-cast concrete kerbs (complying with SABS 927) in maximum lengths of 1m lengths, wet presses, placed in position, bedded and jointed in (3:1) cement mortar and flush pointed on exposed faces, including 15MPa/19mm unreinforced concrete haunching at the back of each joint, excavation, backfilling, ramming, etc.:</u></p>				
21	<p>75 x 250mm high overall, laid in lengths not exceeding 1000mm on a well rammed earth bottom or base course.</p>	m	431		
	<p><u>SCHOOL SPECTATOR SEATING AREA</u></p>				
	<p>Carried to Collection</p>				R
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<u>5m x 5 Tier Standard School Spectator Stand</u>				
22	2mm x 40 mm Square Tubing, Hot dip galvanised finish with treated Pine seating.	No	15	
<u>SUNDRIES</u>				
<u>Scoreboard:</u>				
23	3m x 1.5m Aluminium structure frame with aluminium plate screen scoreboard, painted with Antique Green Matte Enamel paint background composition and white enamel paint for school name, borders for score boxes and overall frame.	No	2	
<u>Combi Court Posts and Nets:</u>				
24	2x 76mm Removable adjustable square Mild Steel posts powder coated, painted in Antique Green Gloss Enamel paint with Brass Winders mechanism and handle allowing locking for tensioning including high performance 12.8m heavy duty 3.5mm braided HDPE net twine and features a quad-stitched optic white headband.	No	2	
25	Permanent 76mm square mild steel Netball Goal Post, with solid ring and net included, bolted to the slab. 2 x hoops to accommodate junior & senior players, painted in Antique Green Gloss Enamel paint.	No	4	
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	<u>BILL NO. 11</u>			
	<u>ATTENUATION POND</u>			
	<u>PREAMBLES</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition), the Department of Public Works document No. PW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated hereunder.			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Reference to drawings and details:</u>			
	Where drawings and/ or details have been referred to in the description of items the Tenderers should price for complete detail and specification on such details and/ or drawing. No claims relating to the omissions on the part of tenders will be entertained.			
	<u>BULK EXCAVATION, FILLING, ETC.</u>			
	<u>Bulk excavations in earth for attenuation dam:</u>			
1	Not exceeding 2m deep.	m3	1 544	
	<u>Extra over bulk excavations in earth for excavation in:</u>			
2	Soft rock.	m3	124	
3	Hard rock.	m3	62	
	<u>Extra over all excavations for cart away:</u>			
4	Surplus excavated material from excavations and/or stock piles on site to a dumping site identified by the contractor.	m3	1 544	
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<u>De-watering of seepage water and water from other subterranean sources in excavations:</u>					
10	Provide water pump for de-watering of water including maintenance and removal.	No	1		
11	Provide necessary hoses for the above, including couplings, etc.	m	100		
12	Allow for pumping (One pump).		Item		
<u>FILLING, ETC</u>					
<u>Filling supplied by the contractor under attenuation pond, etc.</u>					
13	G7 Gravel-soil material compacted to 93% Mod AASHTO density.	m3	53		
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:</u>					
14	In landscape mounds, berms, etc.	m3	29		
<u>Compaction of surfaces:</u>					
15	Compaction of natural or excavated ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize materials, adding suitable material where necessary and compacting to 93% Mod AASHTO density.	m2	823		
<u>TESTS, ETC.</u>					
<u>Prescribed tests to determine degree of compaction or other properties of ground or filling:</u>					
16	Modified AASHTO density test and deliver the results to the Engineer and Principal Agent within 24 hours of the tests being completed.	No	5		
Carried to Collection					
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**GABIONS AND INTERLOCKING BLOCK
RETAINING STRUCTURES**

**Gabions of galvanised wire boxes laced together
and filled with broken stone:**

17	500mm Thick retaining wall of 1 x 1 x 0.5m boxes properly bonded (Total height not exceeding 5m).	m3	137
18	300mm Thick retaining wall of 1 x 1 x 0.3m boxes properly bonded (Total height not exceeding 5m).	m3	6
19	300mm Thick base protection of 1 x 1 x 0.3m reno mattresses on flat.	m3	14

FILTER FABRIC

Tyre A4/U24 Geotextile filter fabric blanket:

20	Under stone filled gabion mattresses, including preparing ground surface under.	m2	862
21	Vertically behind stone filled gabion retaining walls.	m2	177

MANHOLE

22	540 x 540mm Brick inspection chamber 950mm deep internally with 200 x 200mm opening to top of concrete reducer slab.	No	1
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SPILLWAY

23	Grassed 'Armoflex 140' lining laid sloping.	m2	59
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CONCRETE CHANNELS, ETC

24	30mm Wide x 500mm deep trapezoidal concrete channel with 100mm thick walls , comprising 25MPa concrete cast in 1m sections , 193 mesh reinforcement and finished smooth on exposed surfaces including necessary excavation and formwork.	m	3
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ATTENUATION POND

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 1</u></p> <p><u>PROVISIONAL SUMS AND ALLOWANCES</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>General:</u></p> <p>Unless otherwise described, all prime cost amounts and provisional sums shall be nett. No provision for 5 percent cash discount shall be included for the main Prime cost amounts and provisional sums exclude value added tax.</p> <p>In the event of a prime cost amount or provisional sum being omitted the items "Allow for profit"... and "allow for attendance" applicable, shall be omitted together with the prime cost amount or provisional sum and no claim whatsoever will be entertained in this regard.</p> <p>The principal agent shall be entitled to nominate or select any further specialist and other to execute work or supply and fix any goods whether or not a provisional sum is included in the bills of quantities and such specialists and other will then be deemed to be "selected subcontractors" as the case may be.</p> <p>Where profit stated, the contractor may allow for profit if required</p> <p><u>Attendance upon nominated/selected subcontractors:</u></p> <p>The item "Allow for attendance...." which follows each provisional sum for nominated/selected subcontractors work, shall be deemed to cover all the contractors costs incurred in providing free of charge to the subcontractor the service as set out in the relevant clause in the preliminaries</p>			
	Carried to Collection			
	<p>Section No. 7</p> <p>PROVISIONAL SUMS AND ALLOWANCES</p> <p>Bill No. 1</p> <p>PROVISIONAL SUMS AND ALLOWANCES</p>			R

Taking delivery:

Taking delivery of goods or articles by the contractor on site shall mean getting in, unpacking, checking that the quantity is correct and that the goods are complete and undamaged, submitting a report thereof to the interested parties and issuing vouchers for the receipt of such goods. The contractor is to store the goods and will be held responsible for the safety thereof and indemnify the employer against any damage or loss which may occur.

Works executed under a separate/direct contract:

The contractor shall permit access to the site and to the places where the work is to be carried out and provide every facility to enable the specialist to carry out his work in a workmanlike manner and in proper order and sequence.

Co-ordination:

The contractor shall obtain all necessary particulars of the subcontractors work timeously and the contractor will be responsible for the programming and coordination of the works.

Number of nominated/selected subcontractors:

The contractors attention is drawn to the fact that the indicated individual provisional sums may consist of numerous specialist, all of which will become nominated/selected subcontractors. The contractor must therefore allow in his tender for any cost implication this may bring about, as no claims in this regard will be entertained.

The contractor shall obtain all necessary particulars of the subcontractors work timeously and the contractor will be responsible for the programming and coordination of the works

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PROVISIONAL SUMS AND ALLOWANCES

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**PROVISIONAL SUMS FOR
NOMINATED/SELECTED SUB-
CONTRACTORS**

Eskom Upgrade

1 Provide the sum of R300 000.00 (Three Hundred Thousand Rand) for Eskom Upgrade, the amount to be used at the discretion of the Principal Agent or deducted in whole or in part if not required

Item

2 Profit

Item

3 Attendance

Item

Electrical Generator

4 Provide the sum of R1 200 000.00 (One Million Two Hundred Thousand Rand) for Electrical Generator, the amount to be used at the discretion of the Principal Agent or deducted in whole or in part if not required

Item

5 Profit

Item

6 Attendance

Item

Vegetable Garden

7 Provide the sum of R80 000.00 (Eighty Thousand Rand) for establishment of school garden, the amount to be used at the discretion of the Principal Agent or deducted in whole or in part if not required.

Item

8 Profit

Item

9 Attendance

Item

Rehabilitation of existing site:

10 Provide the sum of R2 800 000.00 (Two Million, Eight Hundred Thousand Rand) for rehabilitation of existing site in accordance to owner's specification complete, to be used at the discretion of the Principal Agent and deducted in whole or in part if not required

Item

11 Profit

Item

12 Attendance

Item

Carried to Collection

R

**Section No. 7
PROVISIONAL SUMS AND ALLOWANCES
Bill No. 1
PROVISIONAL SUMS AND ALLOWANCES**

<u>Rainwater Harvesting:</u>				
13	Provide the sum of R500 000.00 (Five Hundred Thousand Rand) for rainwater harvesting supplied and installed complete, to be used at the discretion of the Principal Agent and deducted in whole or in part if not required.	Item		
14	Profit	Item		
15	Attendance	Item		
<u>Prestressed Steel Tank:</u>				
16	Provide the sum of R800 000.00 (Eight Hundred Thousand Rand) for Prestressed steel tank supplied and installed complete, to be used at the discretion of the Principal Agent and deducted in whole or in part if not required.	Item		
17	Profit	Item		
18	Attendance	Item		
<u>Play Area:</u>				
19	Provide the sum of R250 000.00 (Two Hundred and Fifty Thousand Rand) for Play Area and Equipment complete, to be used at the discretion of the Principal Agent and deducted in whole or in part if not required.	Item		
20	Profit	Item		
21	Attendance	Item		
<u>Kitchen Equipment</u>				
22	Provide the sum of R500 000.00 (Five Hundred Thousand Rand) for Kitchen Equipment supplied and installed complete, to be used at the discretion of the Principal Agent and deducted in whole or in part if not required.	Item		
23	Profit	Item		
24	Attendance	Item		
Carried to Collection			R	
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	<u>Borehole</u>			
25	Provide the sum of R800 000.00 (Eight Hundred Thousand Rand) for Borehole supplied and installed complete, to be used at the discretion of the Principal Agent and deducted in whole or in part if not required.	Item		
26	Profit	Item		
27	Attendance	Item		
	<u>Irrigation</u>			
28	Provide the sum of R450 000.00 (Four Hundred and Fifty Thousand Rand) for Irrigation system supplied and installed complete, to be used at the discretion of the Principal Agent and deducted in whole or in part if not required.	Item		
29	Profit	Item		
30	Attendance	Item		
	<u>Concrete benches</u>			
31	Provide the sum of R500 000.00 (Five Hundred Thousand Rand) precast concrete benches supplied and installed complete, to be used at the discretion of the Principal Agent and deducted in whole or in part if not required.	Item		
32	Profit	Item		
33	Attendance	Item		
	<u>Walkways and parking cover structure:</u>			
34	Provide the sum of R850 000.00 (Eight Hundred and Fifty Thousand Rand) for walkways and parking covering and structure, the amount to be used at the discretion of the Principal Agent or deducted in whole or in part if not required.	Item		
35	Profit	Item		
	Carried to Collection			
	Section No. 7			
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			R	

Section No. 7

PROVISIONAL SUMS AND ALLOWANCES

Bill No. 1

PROVISIONAL SUMS AND ALLOWANCES

COLLECTION

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Carried to Final Summary

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Section No. 7

PROVISIONAL SUMS AND ALLOWANCES

Bill No. 1

PROVISIONAL SUMS AND ALLOWANCES

Section No	<u>FINAL SUMMARY</u>	Page No		Amount
1	PRELIMINARIES	44		
2	BUILDING WORKS	150		
3	ELECTRICAL INSTALLATION	182		
4	ELECTRONIC INSTALLATION	213		
5	MECHANICAL INSTALLATION	272		
6	EXTERNAL WORKS	325		
7	PROVISIONAL SUMS AND ALLOWANCES	332		
	TOTAL BUILDING WORKS		R	
	<u>CSDG CONSTRUCTION SKILLS DEVELOPMENT GOAL</u>			
	Provide a sum of 0.5% of the total for building works for the Construction Skills Development Goal as per CIDB B.U.I.L.D Programme requirements.	Item		
	TOTAL BUILDING COSTS		R	
	<u>CIDB BEST PRACTICE PROJECT FEE</u>			
	Provide a sum of 0.2% (GB) of the total for building costs for CIDB Best Practice Project Levy to be paid directly to the CIDB at the employer's discretion.	Item		
	<u>ESCALATION</u>			
	Provide the sum of R 3 500,000.00 (Three Million, Five Hundred Thousand Rand) for statutory increases (CPAP), to be adjusted, used and paid as instructed by the Client for and based on contractually calculated escalation per item 3.2.4 of the contract data of the Preliminaries Bill and in terms of clauses 17, 31 and 32 of the Principal Building Agreement (refer JBCC).	Item		3 500 000.00
	Sub Total		R	
	Carried Forward		R	

Section No	<u>FINAL SUMMARY</u>	Page No		Amount
	Brought Forward		R	
	<u>CONTINGENCIES</u>			
	Provide the Sum of R8 000 000.00 (Eight Million Rand) for contingencies be used at the Employer`s discretion in terms of Clause 17 of the Principal Building Agreement.	Item		8 000 000.00
	TOTAL CONSTRUCTION COSTS (Excluding VAT)		R	
	VAT at the rate of 15%		R	
	Carried to Form of Tender		R	