

Item No	Quantity	Rate	Amount
<u>SECTION No. 1 - PRELIMINARIES</u>			
<u>BILL NO. 1</u>			
<u>PRELIMINARIES</u>			
<u>MEANING OF TERMS "TENDER / TENDERER"</u>			
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"			
<u>PRELIMINARIES</u>			
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"			
<u>PRICING OF PRELIMINARIES</u>			
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			
Items not priced in these Preliminaries shall be deemed to be included elsewhere in these Bills of Quantities			
Carried to Collection			R
Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES			

SECTION A: JBCC PRINCIPAL BUILDING AGREEMENT

DEFINITIONS

1 A1.0 DEFINITIONS AND INTERPRETATION

Clause 1.0

Clause 1.1 Definition of "**Commencement Date**" is added:

"COMMENCEMENT DATE" means the date that is 5 working days after site hand over.

Clause 1.1 Definition of "**Construction Guarantee**" is amended by replacing it with the following:

"CONSTRUCTION GUARANTEE" means a guarantee at call obtained by the **contractor** from an institution approved by the **employer** in terms of the **employer's** construction guarantee form as selected in the **schedule**

Clause 1.1 Definition of "**Construction Period**" is amended by replacing it with the following:

"CONSTRUCTION PERIOD" means the period commencing on the **commencement date** and ending on the date of **practical completion**

Clause 1.1 Definition of "**Corrupt Practice**" is added:

"CORRUPT PRACTICE" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution

Clause 1.1 Definition of "**Fraudulent Practice**" is added:

Carried to Collection

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

R

"FRAUDULENT PRACTICE" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any tenderer and includes collusive practice among tenderers (prior to or after the tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the tenderer of the benefits of free and open competition

Clause 1.1 Definition of **"Interest"** is amended by replacing it with the following:

"INTEREST" means the interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be in terms of the legislation of the Republic of South Africa, and in particular:

(a) in respect of interest owed by the employer, the interest rate as determined by the Minister of Justice and Constitutional Development from time to time, in terms of section 1(2) of the Prescribed Rate of Interest Act, 1975 (Act No. 55 of 1975), will apply;

and

(b) in respect of interest owed to the employer, the interest rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999), will apply

Clause 1.1 Definition of **"Principal Agent"** is amended by replacing it with the following:

"PRINCIPAL AGENT" means the person or entity appointed by the **employer** and named in the **schedule**. In the event of a **principal agent** not being appointed, then all the duties and obligations of a **principal agent** as detailed in the **agreement** shall be fulfilled by a representative of the **employer** as named in the **schedule**

Clause 1.1 Definition of **"Security"** is amended by replacing it with the following:

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

"SECURITY" means the form of security provided by the **employer** or **contractor**, as stated in the **schedule**, from which the **contractor** or **employer** may recover expense or loss

Clause 1.6 is amended by replacing the words "prepaid registered post, telefax or e-mail" with "prepaid registered post or telefax"

Clause 1.6.4 is amended by replacing it with the following:

No clause

Fixed: _____ Value related: _____ Time related: _____

Item

OBJECTIVE AND PREPARATION

1 A2.0 OFFER, ACCEPTANCE AND PERFORMANCE

Clause 2.0

Fixed: _____ Value related: _____ Time related: _____

Item

2 A3.0 DOCUMENTS

Clause 3.0

Clause 3.2.1 is amended by replacing "14.1" with "14.0"

Clause 3.7 is amended by the addition of the following:

The **contractor** shall supply and keep a copy of the **JBCC** Series 2000 Principal Building Agreement and Preliminaries applicable to this contract on the **site**, to which the **employer, principal agent** and **agents** shall have access at all times

Clause 3.10 is amended by replacing the second reference to "**principal agent**" with the word "**employer**"

Fixed: _____ Value related: _____ Time related: _____

Item

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

1	<p>A4.0 DESIGN RESPONSIBILITY</p> <p>Clause 4.0</p> <p>Clause 4.3 is amended by replacing it with the following:</p> <p>No clause</p> <p>Fixed:_____ Value related:_____ Time related:_____</p>	Item		
2	<p>A5.0 EMPLOYER'S AGENTS</p> <p>Clause 5.0</p> <p>Clause 5.1.2 is amended to include clauses 32.6.3, 34.3 and 34.4 in terms of which the employer has retained its authority and has not given a mandate to the principal agent and in terms of which the employer shall sign all documents.</p> <p>Fixed:_____ Value related:_____ Time related:_____</p>	Item		
3	<p>A6.0 SITE REPRESENTATIVE</p> <p>Clause 6.0</p> <p>Fixed:_____ Value related:_____ Time related:_____</p>	Item		
4	<p>A7.0 COMPLIANCE WITH REGULATIONS</p> <p>Clause 7.0</p> <p>Fixed:_____ Value related:_____ Time related:_____</p>	Item		
5	<p>A8.0 WORKS RISK</p> <p>Clause 8.0</p> <p>Fixed:_____ Value related:_____ Time related:_____</p>	Item		
Carried to Collection			R	
<p>Section No. 1</p> <p>Bill No. 1</p> <p>PRELIMINARIES AND GENERAL</p> <p>MPENDULO PUBLIC P SCHOOL</p> <p>PROVISIONAL BILLS OF QUANTITIES</p>				

1	<p>A9.0 INDEMNITIES</p> <p>Clause 9.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
2	<p>A10.0 WORKS INSURANCES</p> <p>Clause 10.0</p> <p>Clause 10.0 is amended by the addition of the following clauses:</p> <p>10.5 Damage to the Works</p> <p>(a) Without in any way limiting the contractor's obligations in terms of the contract, the contractor shall bear the full risk of damage to and/or destruction of the works by whatever cause during construction of the works and hereby indemnifies and holds harmless the employer against any such damage. The contractor shall take such precautions and security measures and other steps for the protection and security of the works as the contractor may deem necessary</p> <p>(b) The contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works</p> <p>(c) The employer shall carry the risk of damage to or destruction of the works and materials paid for by the employer that is the result of the excepted risks as set out in 10.6</p> <p>(d) Where the employer bears the risk in terms of this contract, the contractor shall, if requested to do so, reinstate any damage or destroyed portions of the works and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof</p>			
	Carried to Collection		R	
	<p>Section No. 1</p> <p>Bill No. 1</p> <p>PRELIMINARIES AND GENERAL</p> <p>MPENDULO PUBLIC P SCHOOL</p> <p>PROVISIONAL BILLS OF QUANTITIES</p>			

10.6 Injury to Persons or loss of or damage to Properties

- (a) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the **works** unless due to any act or negligence of any person for whose actions the **employer** is legally liable
- (b) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the **site**, whether belonging to or under the control of the **employer** or any other body or person, arising out of or in the course of or by reason of the execution of the **works** unless due to any act or negligence of any person for whose actions the **employer** is legally liable
- (c) The **contractor** shall, upon receiving a **contract instruction** from the **principal agent**, cause the same to be made good in a perfect and workmanlike manner at his own cost and in default thereof the **employer** shall be entitled to cause it to be made good and to recover the cost thereof from the **contractor** or to deduct the same from amounts due to the **contractor**
- (d) The **contractor** shall be responsible for the protection and safety of such portions of the premises placed under his control by the **employer** for the purpose of executing the **works** until the issue of the **certificate of practical completion**

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

- (e) Where the execution of the **works** involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the **contractor** shall obtain adequate insurance and will remain adequately insured or insured to the specific limit stated in the contract against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the **works** has been completed
- (f) The **contractor** shall at all times proceed immediately at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the **works**

10.7 High risk insurance

In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply:

10.7.1 Damage to the works

The **contractor** shall, from the **commencement date** of the **works** until the date of the **certificate of practical completion** bear the full risk of and hereby indemnifies and holds harmless the **employer** against any damage to and/or destruction of the **works** consequent upon a catastrophic ground movement as mentioned above. The **contractor** shall take such precautions and security measures and other steps for the protection of the **works** as he may deem necessary

When so instructed to do so by the **principal agent**, the **contractor** shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the **works** and to rebuild, restore, replace and/or repair the **works**, at the **contractor's** own costs

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

10.7.2 Injury to persons or loss of or damage to property

The **contractor** shall be liable for and hereby indemnifies and holds harmless the **employer** against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of, or caused by a catastrophic ground movement as mentioned above

The **contractor** shall be liable for and hereby indemnifies the **employer** against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the **site**, whether belonging to or under the control of the **employer** or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of the contract

10.7.3 It is the responsibility of the **contractor** to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.7.1 and 10.7.2. Without limiting the **contractor's** obligations in terms of the contract, the **contractor** shall, within twenty-one (21) **calendar days** of the **commencement date** but before commencement of the **works**, submit to the **employer** proof of such insurance policy, if requested to do so

10.7.4 The **employer** shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the **contractor's** default of his obligations as set out in 10.7.1; 10.7.2 and 10.7.3. Such losses or damages may be recovered from the **contractor** or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the **employer** and the **contractor** and for this purpose all these contracts shall be considered one indivisible whole

Fixed: _____ Value related: _____ Time related: _____

Item

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

1	A11.0 LIABILITY INSURANCES Clause 11.0 Fixed: _____ Value related: _____ Time related: _____	Item		
2	A12.0 EFFECTING INSURANCES Clause 12.0 Fixed: _____ Value related: _____ Time related: _____	Item		
3	A13.0 No clause	N/A		
4	A14.0 SECURITY Clause 14.0 Clauses 14.1 - 14.8 are amended by replacing them with the following: 14.1 The security to be submitted by the contractor to the employer will be as a payment reduction of up to ten per cent (10%) of the value certified in the payment certificate (excluding VAT) 14.1.1 The payment reduction of the value certified in a payment certificate shall be <i>mutatis mutandi</i> in terms of 31.8(A) 14.1.2 The employer shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the employer complies with the provisions of 33.4 in which event the employer's entitlement shall take precedence over his obligations to refund the payment reduction security or portions thereof to the contractor 14.2 Where security as a payment reduction of ten per cent (10%) of the value certified in the payment certificate (excluding VAT) has been selected: 14.2.1 The payment reduction of the value certified in a payment certificate shall be <i>mutatis mutandi</i> in terms of 31.8(B)			
	Carried to Collection		R	
	Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES			

14.2.2 The **employer** shall be entitled to recover expense and loss from the payment reduction in terms of 33.0 provided that the **employer** complies with the provisions of 33.4 in which event the **employer's** entitlement shall take precedence over his obligations to refund the payment reduction **security** or portions thereof to the **contractor**

14.9 Should the **contractor** fail to furnish the **security** in terms of 14.2, the **employer**, in his sole discretion and without notification to the **contractor**, is entitled to change the **contractor's** selected form of **security** to that of a ten per cent (10%) payment reduction of the value certified in the **payment certificate** (excluding VAT), whereafter 14.7 shall be applicable

Fixed: _____ Value related: _____ Time related: _____

Item

EXECUTION

1 A15.0 PREPARATION FOR AND EXECUTION OF THE WORKS

Clause 15.0

Clause 15.1.1 is amended by replacing it with:

No clause

Clause 15.1.2 is amended by replacing it with:

The **security** selected in terms of 14.0

Clause 15.1 is amended by the addition of the following clause:

15.1.4 An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), within fourteen (14) **calendar days of commencement date**

Clause 15.2.1 is amended by replacing it with the following clause:

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Give the **contractor** possession of the **site** within ten (10) **working days** of the **contractor** complying with the terms of 15.1.4

Fixed: _____ Value related: _____ Time related: _____

Item

1 A16.0 ACCESS TO THE WORKS

Clause 16.0

Fixed: _____ Value related: _____ Time related: _____

Item

2 A17.0 CONTRACT INSTRUCTIONS

Clause 17.0

Clause 17.1.11 is amended by deleting the words "and the appointment of **nominated** and **selected subcontractors**"

Fixed: _____ Value related: _____ Time related: _____

Item

3 A18.0 SETTING OUT OF THE WORKS

Clause 18.0

Fixed: _____ Value related: _____ Time related: _____

Item

4 A19.0 ASSIGNMENT

Clause 19.0

Fixed: _____ Value related: _____ Time related: _____

Item

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

1	<p>A20.0 NOMINATED SUBCONTRACTORS</p> <p>Clause 20.0</p> <p>Clause 20.1.3 is amended by replacing it with the following:</p> <p>No clause</p> <p>Note: See item B9.1 hereinafter for adjustment of attendance on nominated subcontractors executing work allowed for under provisional sums</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
2	<p>A21.0 SELECTED SUBCONTRACTORS</p> <p>Clause 21.0</p> <p>Clause 21 is amended by replacing it with:</p> <p>No clause</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
3	<p>A22.0 EMPLOYER'S DIRECT CONTRACTORS</p> <p>Clause 22.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
4	<p>A23.0 CONTRACTOR'S DOMESTIC SUBCONTRACTORS</p> <p>Clause 23.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
Carried to Collection			R	
<p>Section No. 1</p> <p>Bill No. 1</p> <p>PRELIMINARIES AND GENERAL</p> <p>MPENDULO PUBLIC P SCHOOL</p> <p>PROVISIONAL BILLS OF QUANTITIES</p>				

	<p><u>COMPLETION</u></p> <p>1 A24.0 PRACTICAL COMPLETION</p> <p>Clause 24.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p>2 A25.0 WORKS COMPLETION</p> <p>Clause 25.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p>3 A26.0 FINAL COMPLETION</p> <p>Clause 26.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p>4 A27.0 LATENT DEFECTS LIABILITY PERIOD</p> <p>Clause 27.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p>5 A28.0 SECTIONAL COMPLETION</p> <p>Clause 28.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p>6 A29.0 REVISION OF DATE FOR PRACTICAL COMPLETION</p> <p>Clause 29.0</p> <p>Clause 29.2.5 is amended by replacing it with:</p> <p>No clause</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES</p>	Item		
		Item		
		Item		
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		Item		
		Item		
		Item		
			R	

1	<p>A30.0 PENALTY FOR NON-COMPLETION</p> <p>Clause 30.0</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p><u>PAYMENT</u></p>	Item		
2	<p>A31.0 INTERIM PAYMENT TO THE CONTRACTOR</p> <p>Clause 31.0</p> <p>Clause 31.5.2 is amended by replacing "14.7.1" with "14.0 and 31.8"</p> <p>Clause 31.8 is amended by replacing it with the following two alternative clauses:</p> <p>Alternative A</p> <p>31.8(A) Where a security is selected in terms of 14.1; the value of the works in terms of 31.4.1 and materials and goods in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:</p> <p>31.8(A).1 Ninety-five percent (95%) of such value in interim payment certificates issued up to the date of practical completion</p> <p>31.8(A).2 Ninety-seven and half percent (97.5%) of such value in interim payment certificates issued on the date of practical completion and up to but excluding the date of final completion</p> <p>31.8(A).3 Ninety-nine percent (99%) of such value in interim payment certificates issued on the date of final completion and up to but excluding the final payment certificate in terms of 34.6</p> <p>31.8(A).4 One hundred percent (100%) of such value in the final payment certificate in terms of 34.6 except where the amount certified is in favour of the employer. In such an event the payment reduction shall remain at the adjustment level applicable to the final payment certificate</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES</p>		R	

Clause 31.12 is amended by deleting the following:

Payment shall be subject to the **employer** giving the **contractor** a tax invoice for the amount due

Fixed: _____ Value related: _____ Time related: _____

Item

1 A32.0 ADJUSTMENT TO THE CONTRACT VALUE

Clause 32.0

Clauses 32.5.1, 32.5.4 and 32.5.7 are amended by the addition of the following at the end of the sentence:

"due to no fault of the **contractor**"

Add the following clauses: 33.2.9 to 33.2.13:

33.2.9 the **contractor's** failure or neglect to commence with the works on the dates prescribed in the contract

33.2.10 the **contractor's** failure or neglect to proceed with the works in terms of the contract

33.2.11 the **contractor's** failure or neglect for any reason to complete the works in accordance with the contract

33.2.12 the **contractor's** refusal or neglect to comply strictly with any of the conditions of contract or any contract instructions and/or orders in writing given in terms of the contract

33.2.13 the **contractor's** estate being sequestrated; liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.

Fixed: _____ Value related: _____ Time related: _____

Item

2 A33.0 RECOVERY OF EXPENSE AND LOSS

Clause 33.0

Fixed: _____ Value related: _____ Time related: _____

Item

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

1 **A34.0 FINAL ACCOUNT AND FINAL PAYMENT**

Clause 34.0

Clause 34.1 is amended by removing "#" next to 34.1

Clause 34.2 is amended by inserting "#" next to 34.2

Clause 34.13 is amended by replacing "seven (7) **calendar days**" with "twenty-one (21) **calendar days**" and deleting the words "subject to the **employer** giving the **contractor** a tax invoice for the amount due"

Fixed: _____ Value related: _____ Time
related: _____

Item

2 **A35.0 PAYMENT TO OTHER PARTIES**

Clause 35.0

Fixed: _____ Value related: _____ Time
related: _____

Item

CANCELLATION3 **A36.0 CANCELLATION BY EMPLOYER -
CONTRACTOR'S DEFAULT**

Clause 36.0

Clause 36.1 is amended by the addition of the following clauses:

36.1.3 refuses or neglects to comply strictly with any of the conditions of contract

36.1.4 estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa

36.1.5 in the judgement of the **employer**, has engaged in **corrupt** or **fraudulent practices** in competing for or in executing the contract

Clause 36.3 is amended by removing the reference to "No clause" and replacing the words "**principal agent**" with "**employer**"

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Clause 36.0 is amended by the addition of the following clause:

36.3 Remove reference to "No clause", and replace "principal agent" with "employer"

36.7 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever

Fixed: _____ Value related: _____ Time related: _____

Item

1 A37.0 CANCELLATION BY EMPLOYER - LOSS AND DAMAGE

Clause 37.0

Clause 37.3.5 is amended by replacing "ninety (90)" with "one hundred and twenty (120)"

Clause 37.0 is amended by the addition of the following clause:

37.3.5 Replace "ninety (90)" with "one hundred and twenty (120)" and 38.5.4

Fixed: _____ Value related: _____ Time related: _____

Item

2 A38.0 CANCELLATION BY CONTRACTOR - EMPLOYER'S DEFAULT

Clause 38.0

Clause 38.5.4 is amended by replacing "ninety (90)" with "one hundred and twenty (120)"

Clause 38.0 is amended by the addition of the following clause:

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

38.7 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever

Fixed: _____ Value related: _____ Time related: _____

Item

1 **A39.0 CANCELLATION - CESSATION OF THE WORKS**

Clause 39.0

Clause 39.3.5 is amended by the addition of the following at the end of the sentence:

"within one hundred and twenty (120) **working days** of completion of such a report"

Fixed: _____ Value related: _____ Time related: _____

Item

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

DISPUTE**1 A40.0 DISPUTE SETTLEMENT**

Clause 40.0

Clause 40.2.2 is amended by replacing "one (1) year" with "three (3) years"

Clause 40.6 is amended by removing the reference to:

No clause

Clause 40.7.1 is amended by replacing "(10)" with "(15)" and by the addition of the following:

Whether or not mediation resolves the dispute, the parties shall bear their own costs concerning the mediation and equally share the costs of the **mediator** and related costs

Fixed: _____ Value related: _____ Time related: _____

Item

SUBSTITUTE PROVISIONS**2 A41.0 STATE CLAUSES**

Clause 41.0

Fixed: _____ Value related: _____ Time related: _____

Item

CONTRACT VARIABLES**3 A42.0 THE SCHEDULE (C1.2)**

Clause 42.0

Tenderers are referred to the C1.2 CONDITIONS OF CONTRACT AND CONTRACT VARIABLES for variables pertaining to this contract

Fixed: _____ Value related: _____ Time related: _____

Item

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

SECTION B: JBCC PRELIMINARIES**B1.0 DEFINITIONS AND INTERPRETATION****1 B1.1 Definitions and interpretation**

See also clause A1.0 of Section A for additional and/or amended definitions which shall apply equally to this Section

Fixed: _____ Value related: _____ Time related: _____

Item

B2.0 DOCUMENTS**2 B2.1 Checking of documents**

Fixed: _____ Value related: _____ Time related: _____

Item

3 B2.2 Provisional bills of quantities

Fixed: _____ Value related: _____ Time related: _____

Item

4 B2.3 Availability of construction documentation

Fixed: _____ Value related: _____ Time related: _____

Item

5 B2.4 Interests of agents

Fixed: _____ Value related: _____ Time related: _____

Item

6 B2.5 Priced documents

Fixed: _____ Value related: _____ Time related: _____

Item

7 B2.6 Tender submission

Clause 2.6 is amended by replacing "JBCC Form of Tender" with "Form of Offer and Acceptance DPW-07(EC)"

Fixed: _____ Value related: _____ Time related: _____

Item

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

B3.0 THE SITE			
1	B3.1 Defined works area Fixed: _____ Value related: _____ Time related: _____	Item	
2	B3.2 Geotechnical investigation Fixed: _____ Value related: _____ Time related: _____	Item	
3	B3.3 Inspection of the site Fixed: _____ Value related: _____ Time related: _____	Item	
4	B3.4 Existing premises occupied Fixed: _____ Value related: _____ Time related: _____	Item	
5	B3.5 Previous work - dimensional accuracy Fixed: _____ Value related: _____ Time related: _____	Item	
6	B3.6 Previous work - defects Fixed: _____ Value related: _____ Time related: _____	Item	
7	B3.7 Services - known Fixed: _____ Value related: _____ Time related: _____	Item	
8	B3.8 Services - unknown Fixed: _____ Value related: _____ Time related: _____	Item	
9	B3.9 Protection of trees Fixed: _____ Value related: _____ Time related: _____	Item	
Carried to Collection			
Section No. 1			
Bill No. 1			
PRELIMINARIES AND GENERAL			
MPENDULO PUBLIC P SCHOOL			
PROVISIONAL BILLS OF QUANTITIES			

1	B3.10 Articles of value Fixed: _____ Value related: _____ Time related: _____	Item		
2	B3.11 Inspection of adjoining properties Fixed: _____ Value related: _____ Time related: _____	Item		
	<u>B4.0 MANAGEMENT OF CONTRACT</u>			
3	B4.1 Management of the works Fixed: _____ Value related: _____ Time related: _____	Item		
4	B4.2 Programme for the works Fixed: _____ Value related: _____ Time related: _____	Item		
5	B4.3 Progress meetings Fixed: _____ Value related: _____ Time related: _____	Item		
6	B4.4 Technical meetings Fixed: _____ Value related: _____ Time related: _____	Item		
7	B4.5 Labour and plant records Fixed: _____ Value related: _____ Time related: _____	Item		
	<u>B5.0 SAMPLES, SHOP DRAWINGS AND MANUFACTURERS' INSTRUCTIONS</u>			
8	B5.1 Samples of materials Fixed: _____ Value related: _____ Time related: _____	Item		
	Carried to Collection			
	Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES		R	

1	B5.2 Workmanship samples Fixed: _____ Value related: _____ Time related: _____	Item
2	B5.3 Shop drawings Fixed: _____ Value related: _____ Time related: _____	Item
3	B5.4 Compliance with manufacturers' instructions Fixed: _____ Value related: _____ Time related: _____	Item
<u>B6.0 TEMPORARY WORKS AND PLANT</u>		
4	B6.1 Deposits and fees Fixed: _____ Value related: _____ Time related: _____	Item
5	B6.2 Enclosure of the works Fixed: _____ Value related: _____ Time related: _____	Item
6	B6.3 Advertising Fixed: _____ Value related: _____ Time related: _____	Item
7	B6.4 Plant, equipment, sheds and offices Fixed: _____ Value related: _____ Time related: _____	Item
8	B6.5 Main notice board Fixed: _____ Value related: _____ Time related: _____	Item
9	B6.6 Subcontractors' notice board Fixed: _____ Value related: _____ Time related: _____	Item

Carried to Collection

R

Section No. 1
 Bill No. 1
 PRELIMINARIES AND GENERAL
MPENDULO PUBLIC P SCHOOL
PROVISIONAL BILLS OF QUANTITIES

B7.0 TEMPORARY SERVICES1 **B7.1 Location**

Fixed: _____ Value related: _____ Time related: _____

Item

2 **B7.2 Water**

Fixed: _____ Value related: _____ Time related: _____

Item

3 **B7.3 Electricity**

Fixed: _____ Value related: _____ Time related: _____

Item

4 **B7.4 Telecommunication facilities**

Fixed: _____ Value related: _____ Time related: _____

Item

5 **B7.5 Ablution facilities**

Fixed: _____ Value related: _____ Time related: _____

Item

B8.0 PRIME COST AMOUNTS6 **B8.1 Responsibility for prime cost amounts**

Fixed: _____ Value related: _____ Time related: _____

Item

B9.0 ATTENDANCE ON N/S SUBCONTRACTORS7 **B9.1 General attendance**

Fixed: _____ Value related: _____ Time related: _____

Item

8 **B9.2 Special attendance**

Fixed: _____ Value related: _____ Time related: _____

Item

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

1	<p>B9.3 Commissioning - fuel, water and electricity</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p>B10.0 FINANCIAL ASPECTS</p>	Item		
2	<p>B10.1 Statutory taxes, duties and levies</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
3	<p>B10.2 Payment for preliminaries</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
4	<p>B10.3 Adjustment of preliminaries</p> <p>Clauses B10.3.1 and B10.3.2 are amended by replacing "within fifteen (15) working days of taking possession of the site" with "when submitting his priced bills of quantities / lump sum document"</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
5	<p>B10.4 Payment certificate cash flow</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p>B11.0 GENERAL</p>	Item		
6	<p>B11.1 Protection of the works</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
7	<p>B11.2 Protection / isolation of existing / sectionally occupied works</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item		
Carried to Collection			R	
Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES				

1	B11.3 Security of the works Fixed: _____ Value related: _____ Time related: _____	Item
2	B11.4 Notice before covering work Fixed: _____ Value related: _____ Time related: _____	Item
3	B11.5 Disturbance Fixed: _____ Value related: _____ Time related: _____	Item
4	B11.6 Environmental disturbance Fixed: _____ Value related: _____ Time related: _____	Item
5	B11.7 Works cleaning and clearing Fixed: _____ Value related: _____ Time related: _____	Item
6	B11.8 Vermin Fixed: _____ Value related: _____ Time related: _____	Item
7	B11.9 Overhand work Fixed: _____ Value related: _____ Time related: _____	Item
8	B11.10 Instruction manuals and guarantees Fixed: _____ Value related: _____ Time related: _____	Item
9	B11.11 As built information Fixed: _____ Value related: _____ Time related: _____	Item

Carried to Collection

R

Section No. 1
 Bill No. 1
 PRELIMINARIES AND GENERAL
MPENDULO PUBLIC P SCHOOL
PROVISIONAL BILLS OF QUANTITIES

1	<p>B11.12 Tenant installations</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p>B12.0 SCHEDULE OF VARIABLES</p>	Item		
2	<p>B12.1 Schedule of variables</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p>This schedule contains all variables referred to in this document and is divided into pre-tender and post-tender categories. The pre-tender category must be completed in full and included in the tender documents. Both the pre-tender and post-tender categories form part of these Preliminaries</p> <p>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 italicised in [] brackets</p> <p>12.1 PRE-TENDER INFORMATION</p> <p>12.1.1 Provisional bills of quantities [2.2] The quantities are provisional</p> <p style="text-align: center;">YES</p> <p>12.1.2 Availability of construction documentation [2.3] <i>Construction documentation is complete</i></p> <p style="text-align: center;">YES</p> <p>12.1.3 Interests of agents [2.4] Details:</p> <p>12.1.4 Defined works area [3.1] Details:</p> <p style="text-align: right;">Carried to Collection</p> <p>Section No. 1 Bill No. 1 PRELIMINARIES AND GENERAL MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES</p>	Item		R

12.1.5 **Geotechnical investigation**

[3.2] Details:

12.1.6 **Existing premises occupied**

[3.4] Specific requirements:

12.1.7 **Previous work - dimensional accuracy**

[3.5] Details:

12.1.8 **Previous work - defects**

[3.6] Details:

12.1.9 **Services - known**

[3.7] Details:

12.1.10 **Protection of trees**

[3.9] Specific requirements:

12.1.11 **Inspection of adjoining properties**

[3.11] Specific requirements:

12.1.12 **Enclosure of the works**

[6.2] Specific requirements:

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, chair, drawing stool, drawing board and lock-up drawers for drawings. The office shall be kept clean and fit for use at all times

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

12.1.14 Main notice board**[6.5]** Specific requirements:

The **contractor** shall provide, erect where directed, maintain and remove on completion of the **works** a notice board size 3 x 3m as type Drawing GEN 063, constructed of suitable boarding with flat smooth surface and with edging bead 19mm thick round outer edges and projecting 12mm from face of boarding and rounded on front edge. The board shall be securely fixed to hoarding, where hoarding is provided, or fixed to and including a suitable supporting structure of timber or tubular posts and braces. The board is to be painted ivory white and the bead and 12mm wide dividing lines dark green. All wording shall be inscribed in dark green as per the coat of arms for SA. All wording shall be inscribed in dark green painted sans serif lettering

12.1.15 Subcontractors' notice board**[6.6]** A notice board is required**NO**

Specific requirements:

12.1.16 Water**[7.2]** Option A (by **contractor**)**NO**Option B (by **employer** - free of charge)**NO**Option C (by **employer** - metered)**YES****Carried to Collection****R**

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

12.1.17 Electricity**[7.3]** Option A (by **contractor**)**NO**Option B (by **employer** - free of charge)**NO**Option C (by **employer** - metered)**YES****12.1.18 Telecommunications****[7.4]** Telephone**YES**

Facsimile

YES

E-mail

YES**12.1.19 Ablution 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**NO****Carried to Collection****R**

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

12.1.21 Special attendance**[9.2] Subcontractor (1) details:****Subcontractor (2) details:****Subcontractor (3) details:****Subcontractor (4) details:****12.1.22 Protection of the works****[11.1] Specific requirements:****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:****12.2 POST-TENDER INFORMATION****12.2.1 Payment of preliminaries****[10.2] Option A (prorated)****NO**

Option B (calculated)

YES**Carried to Collection****R**

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

12.2.2 **Adjustment of preliminaries**

[10.3] Option A (three categories)

NO

Option B (detailed breakdown)

YES

12.2.3 **Additional agreed preliminaries items**

Details:

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

SECTION C: SPECIFIC PRELIMINARIES

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

1 **C1.0 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 understood by the tenderer he shall, before submitting his tender, obtain clarification in writing from the **principal agent**

Fixed: _____ Value related: _____
Time related: _____

Item

2 **C2.0 GENERAL PREAMBLES**

The document "Specification of Materials and Methods to be used - PW371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014)." is obtainable on the Department's website (<http://www.publicworks.gov.za/> under "Consultants Guidelines"), and shall be read in conjunction with the **bills of quantities / lump sum document** and be referred to for the full descriptions of work to be done and materials to be used

Fixed: _____ Value related: _____
Time related: _____

Item

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

1 **C3.0 TRADE NAMES**

Wherever a trade name for any product has been described in the **bills of quantities / lump sum document**, 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

Fixed: _____ Value related: _____
Time related: _____

Item

2 **C4.0 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 / lump sum document**. 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

The **contractor** must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the **principal agent**, notwithstanding the provisions of clause A 31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress **payment certificate** until the **contractor** provides satisfactory proof of compliance. The **contractor** shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

C4.1 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

C4.2 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: _____

Item

C4.3 POSTERS, BOOKLETS, VIDEOS, ETC.

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

Fixed: _____ Value related: _____

Time related: _____

Item

C4.4 ACCESS TO CONDOMS

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

Fixed: _____ Value related: _____

Time related: _____

Item

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

C4.5 MONITORING

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

Fixed: _____ Value related: _____

Time related: _____

Item

Carried to Collection

R

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

Carried Forward**R**

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Section No. 1

Bill No. 1

PRELIMINARIES AND GENERAL

COLLECTION

	Page No	Amount
Brought Forward		R
Total Brought Forward from Page No.	21	
	22	
	23	
	24	
	25	
	26	
	27	
	28	
	29	
	30	
	31	
	32	
	33	
	34	
	35	
	36	
	37	
Carried Forward to Summary of Section No. 1		R
Section No. 1		
Bill No. 1		
PRELIMINARIES AND GENERAL		
MPENDULO PUBLIC P SCHOOL		
PROVISIONAL BILLS OF QUANTITIES		

Item No	Quantity	Rate	Amount
<u>BILL No. 2</u>			
<u>HEALTH AND SAFETY REQUIREMENTS</u>			
<u>Note:</u>			
For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
The contractor's prices for all items throughout these bills of quantities shall take account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications.			
Prior to pricing the principal contractor must familiarize him/herself with the Occupational Health and Safety Act No. 85 Of 1993, Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health & Safety specifications.			
The items in this Bill do not contain quantities hence the Contractor must insert his own quantities based on his individual requirements to comply with the Health and Safety obligations and demands of the Occupational Health and Safety Act No. 85 of 1993, Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health & Safety Specifications.			
<u>OCCUPATIONAL HEALTH AND SAFETY</u>			
<u>General:</u>			
1	Preparation of Contractor's site specific Health and Safety Plan.	Item	
2	Submission of the Health and Safety File.	Item	
3	Principal Contractor's initial obligations in respect of the OHS Act and Construction Regulations.	Item	
Carried to Collection			R
Section No. 1 Bill No. 2 HEALTH AND SAFETY MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES			

Section No. 1

Bill No. 2

HEALTH AND SAFETY

COLLECTION

Total Brought Forward from Page No.

**Page
No**

40

41

Amount**Carried Forward to Summary of Section No. 1****R**

Section No. 1

Bill No. 2

HEALTH AND SAFETY

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Bill No	SECTION SUMMARY - SECTION NO.1 - PRELIMINIARIES AND GENERAL	Page No	Amount	
1	PRELIMINARIES AND GENERAL	39		
2	HEALTH AND SAFETY	42		
	Carried to Final Summary		R	
	Section No. 1 MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES			

Item No	Quantity	Rate	Amount
<u>SECTION No. 2 - EXISTING BUILDINGS</u>			
<u>BILL No. 1</u>			
<u>ALTERATIONS, DEMOLITIONS, ETC.</u>			
<u>Note:</u>			
For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Existing Furniture, Equipment, etc</u>			
The Contractor shall not remove or damage any furniture, equipment or similar items that belong to the Department except when specifically described in the items to follow: The Contractor must give the Principal Agent sufficient notice if the removal of these items are required before any prescribed alterations can be done			
<u>Damage to existing finishes</u>			
The Contractor will be held responsible for all damage however caused to existing finishes and fittings, etc. and he must make good all damage at his own expense to the approval of the Principal Agent.			
Breaking down, demolition and alteration activities and tasks, hacking off of existing plaster, etc. is to be executed with care so as to prevent damage to remaining floor and wall surfaces and finishes (where these are to be retained). Tenders will be deemed to include allowance for any necessary protection of existing surfaces and structures as may be necessary to effect the above, as the cost of repairing damage to existing surfaces and structures will be solely for the Contractors account			
Carried to Collection			R
Section No. 2 Bill No. 1 ALTERATIONS MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES			

Responsibility for site

The Contractor is to note that upon possession of the site by himself, and extending until practical completion is achieved, he is solely responsible for the site, site security, general upkeep and cleaning of the site and all other responsibilities in maintaining a construction site in conformance with but not limited to, the Construction Regulations 2014, all local by-laws, all user client regulations, and all Client regulations and procedures. Tenderers are therefore urged to study all available material and to investigate the site fully and areas contiguous to the site, in order to determine the range and extent of responsibility. No additional monetary and/or time claims will be entertained in respect of the above

Explosives

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

General

The Contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum amount of disturbance to adjoining classroom blocks and their students. He shall provide proper protection of the works and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the Principal Agent

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

Carried to Collection

R

Section No. 2

Bill No. 1

ALTERATIONS

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Doors, fanlights, fittings, frames, linings, etc which are to be re-used shall be thoroughly overhauled before refixing including taking off, easing and rehangings, cramping up, re-wedging as required and making good cramps, dowels, etc, and easing, oiling, adjusting and repairing ironmongery as necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber, unless otherwise described. Re-painting or re-varnishing is given separately

"Taking out and removing doors, windows, etc"

implies that the door, etc is to be carefully taken down together with the frame, linings, architraves, window sills, etc complete and where brick lintels occur, it must be supported and propped until the openings are built up or new doors or windows built in position

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

"Forming openings" for doors or windows, etc implies that the plaster or any other covering is to be hacked off and an opening formed sufficient in size to receive the building in of the frame and cramps, and the forming of new dampproof courses, lintels, sills, etc. After building in of the new frame, the opening is to be built against the frame, plaster or faced brickwork to be made good both sides and reveals and floor screeds prepared for finishings to match existing

"Making good" implies that all necessary repairs are to be made to reinstate articles that may be damaged through the removal or otherwise, and the supplying of any new materials to match existing work, and is to include any necessary repairs to adjacent finishings such as floors, skirtings, plaster, painting, etc and such making good is to match adjoining work in all respects and in all trades

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

Carried to Collection

R

Section No. 2

Bill No. 1

ALTERATIONS

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

The Contractor to acknowledge that sequencing of the work will be necessary to accommodate the operational aspects of the school. The Contractor to accordingly factor the above requirement in the construction programme and pricing

"Breaking down and removing" walls, etc implies that the wall is to be taken down to the extent shown on the drawings or as may be described and that all necessary shoring is to be provided and allowed for to ensure the safety of the building during the pulling down or until new walls are erected and all portions of the remaining walls where disturbed or affected by the removal are to be made good and left ready for plaster or other finishings as described

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

"Building up openings" implies that after the removal of any doors, windows or screens that may be described to be taken down, the opening is to be filled up solid (or to the thickness as shown) with new brickwork and is to include all necessary cutting away to form toothings to thoroughly bond to the new work and new finishes to both sides as described.

DEMOLITIONS

Ordinary demolitions

Reference hereunder to cart away shall mean carting off site to a dumping site to be located by the Contractor.

Carried to Collection

Section No. 2

Bill No. 1

ALTERATIONS

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

R

Removal of asbestos material

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

The following shall apply in respect of asbestos removal

The removal of asbestos shall be carried out by a certified entity, registered in accordance with the Occupational Health and Safety Act, 1993 and the Asbestos Regulations 2001

Asbestos in all forms/building elements that is to be removed, shall be carried out in strict accordance with aforementioned regulation and a certificate issued by the entity as contemplated in the above, shall be provided per block for the removal thereof, where the term block shall in this context refer to any single, free standing building structure, regardless of size or purpose

Corresponding disposal certificates shall be issued by the facility at which the asbestos is disposed off, with said facility to, prior to the disposal of any asbestos material provide satisfactory proof that the facility is duly registered and fully compliant in terms of the act, to receive the asbestos material

Under no circumstances is the Contractor nor any of his duly authorised representatives to sell and/or give away asbestos material to any member/s of the school community, the community in general or the public at large. Should this be found to be occurring, the Contractor will be held responsible contractually and may further be prosecuted criminally

The cost for complying with the above, and all requirements of regulation as reflected above is to be priced for in terms for removal of asbestos material. No further claims in this regard will therefore be entertained

Carried to Collection

R

Section No. 2

Bill No. 1

ALTERATIONS

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Carried to Collection

R

Section No. 2
Bill No. 1
ALTERATIONS
MPENDULO PUBLIC P SCHOOL
PROVISIONAL BILLS OF QUANTITIES

TEMPORARY BARRIERS, SCREENS, ETC

Temporary barriers, screens, etc including removal and allow for re-use

1	SANS approved weld mesh type temporary barrier fencing 1,8m high with shade cloth fixed to and including 100mm diameter gum poles set securely min 300mm deep in ground at max 3m spacing	m	150
2	Double gate size 3 x 1.8m high	No	1

REMOVAL OF EXISTING WORK

Breaking up and removing unreinforced concrete:

3	Break up and remove existing 100 mm thick concrete surface bed, stoep or apron	m2	14
4	Average 400mm thick concrete base, footings etc.	m2	10
5	Demolish existing wooden building and remove rubble offsite overall size 13 600mm x 6600 mm x 2800mm high	No	1

Breaking down and removing brickwork, etc.

6	One brick wall including plaster.	m2	25
---	-----------------------------------	----	----

Taking out and removing doors, windows, etc, and preparing opening to receive new doors, windows, etc, including making good cement plaster on both sides (making good paintwork elsewhere).

7	Timber single door and steel door frame not exceeding 2.5m2, including preparing opening for new door frame.	No	32
8	Rusted security gate	No	1
9	Timber single door in existing door frames not exceeding 2.5m2.	No	9
10	Take out damaged steel window frame with glazing not exceeding 2,5m2.	No	1

Carried to Collection

R

Section No. 2

Bill No. 1

ALTERATIONS

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

<u>Taking up and removing vinyl floor & wall coverings, carpeting, etc:</u>					
1	Strip from concrete floors vinyl floor tiling and cart away including preparing screed for new floor covering (elsewhere).	m2	429		
<u>Hack up and remove wall and floor tiles:</u>					
2	Ceramic floor tiles including preparing surface to receive new tiles (elsewhere measured).	m2	102		
<u>IRONMONGERY</u>					
<u>Pinning Boards & Chalk Boards</u>					
3	Take out and remove existing damaged timber pinning or steel chalk board and repair walls, including filling holes with cement mortar.	No	48		
<u>Lockers</u>					
4	Take down and cart away double door steel stationery cupboard, size approximately 900 x 450 x 1800mm high including filling holes with cement mortar.	No	8		
<u>TILING</u>					
<u>Hack up and remove wall and floor tiles:</u>					
5	Ceramic floor tiles including preparing surface to receive new tiles (elsewhere measured).	m2	15		
<u>PLUMBING AND DRAINAGE</u>					
<u>Externally</u>					
6	Take down and remove damaged sheet iron, asbestos or uPVC gutter and downpipes including all stop ends, bends, corners, offsets, shoes, fittings etc.	m	524		
<u>Taking out and removing plumbing pipes including all connectors, tee pieces etc (Provisional):</u>					
7	15-28mm Water piping.	m	45		
8	40-110mm PVC piping.	m	30		
Carried to Collection				R	
Section No. 2					
Bill No. 1					
ALTERATIONS					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

1	Break out and remove redundant sewer manholes and gullies and dispose rubble off site as indicated by the Engineer.	No	3		
	<u>Carefully loosen existing, sanitaryware, taps, traps, etc. and take out and remove complete with brackets, claws, bolts, etc. Block off all piping and repair walls and floors complete:</u>				
2	Ceramic water closet complete including cistern, pan collar etc.	No	22		
3	600 x 900mm high mirror screwed to wall.	No	8		
	<u>Taking out / off and removing plumbing fittings etc:</u>				
4	Stainless steel toilet roll holder.	No	5		
	<u>Take out and remove complete with brackets, claws, bolts, etc.:</u>				
5	Take down and remove damaged curtain track, pelmet and fittings etc.	m	7		
	<u>PLASTERING</u>				
	<u>Floors</u>				
6	Hack up 25mm thick granolithic or floor screed and cart away including preparing surface bed to receive new screed (elsewhere).	m2	429		
	<u>Walls</u>				
7	Hack off existing plaster from wall and prepare brickwork to receive new plaster (new plaster elsewhere measured).	m2	44		
8	Hack off existing plaster around cracks, etc. to 300mm width, and prepare brickwork to receive new plaster (new plaster elsewhere measured) including chicken mesh as described.	m2	90		
	<u>GLAZING</u>				
9	Take carefully out cracked or broken glass of steel window frames including all putty and prepare frame to receive new glazing	m2	25		
Carried to Collection				R	
Section No. 2					
Bill No. 1					
ALTERATIONS					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

Carried to Collection

R

Section No. 2
Bill No. 1
ALTERATIONS
MPENDULO PUBLIC P SCHOOL
PROVISIONAL BILLS OF QUANTITIES

REFURBISHMENT, PREPARATORY WORKS, ETC.**Sundry brickwork refurbishment**

- | | | | |
|---|--|----|----|
| 1 | Replace broken brick in existing face brick wall with matching brick bedded, jointed and pointed in cement mortar to match existing. | No | 10 |
|---|--|----|----|

General repair work

- | | | | |
|---|---|---|----|
| 2 | Hack plaster from brickwork for a width of 100mm either side of crack, nail galvanised stretch plate over crack with steel nails at 200mm centres to receive plaster (elsewhere). | m | 20 |
|---|---|---|----|

Prepare existing surfaces for new finish

- | | | | |
|---|---|----|-----|
| 3 | Clean down, etc. existing painted internal and external plastered walls, prepare by removing all loose and flaking paint, dirt, grease and grime to receive new enamel paint finish. | m2 | 551 |
| 4 | Clean existing facebrick walls by applying sodium hypochlorite solution (1 part household bleach to 2 parts water by volume), clean by using high pressure water jet and suitable mechanical methods to remove loose and unsound substrate material, paint, dirt, bleach, algae/fungi residues and any other surface contaminants including the removal of any plant growth and point with approved epoxy patching mortar, to flush square horizontal and vertical joints, in patchwork to walls. | m2 | 182 |

Repairs to existing:

- | | | | |
|---|---|----|----|
| 5 | Chip/scabble existing plastered wall to form rough surface for new tiles (elsewhere measured). | m2 | 45 |
| 6 | Check existing steel windows of different sizes, replace or repair damaged window catch, handle, casement adjuster, casement fastener with slotted plate, hinges, rollers, etc. Adjust as necessary and leave in complete satisfactory working condition. | No | 66 |
| 7 | Service existing metal wash trough overall size 4000mm x 300mm each complete including all pillar taps, waste, trap etc. | No | 6 |

Carried to Collection**R**

Section No. 2

Bill No. 1

ALTERATIONS

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

1	Service existing steel door frames 813 x 2032mm high including replacing damaged strike plates and hinges to leave in perfect working order.	No	8		
2	Remove existing steel gates of different sizes, replace or repair damaged hinges, locking mechanisms, etc. Adjust as necessary and re-fix in complete satisfactory working condition (painting elsewhere measured).	No	14		
3	Service existing stainless steel urinals including replacing damaged piping to leave in perfect working order.	No	3		
	<u>Carefully take out and set aside in storage on site, complete with any attachments, brackets, claws, bolts, etc.</u>				
4	Allow the Prime Cost Sum of R15,000.00 (Fifteen Thousand Rand) for the moving out of existing items of loose books or movable furniture including reinstating in new position on completion and leave in perfect working order.		Item		
Carried to Collection					R
Section No. 2					
Bill No. 1					
ALTERATIONS					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

Section No. 2

Bill No. 1

ALTERATIONS

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

44

45

46

47

48

49

50

51

52

53

54

55

56

Carried Forward to Summary of Section No. 2

R

Section No. 2

Bill No. 1

ALTERATIONS

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No	Quantity	Rate	Amount
<u>BILL No. 2</u>			
<u>MASONRY</u>			
<u>Note:</u>			
For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>BRICKWORK</u>			
<u>Sizes in descriptions</u>			
Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick			
<u>Hollow walls etc</u>			
Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole.			
Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats "Brixal" bitumen emulsion waterproofing coating.			
<u>Face bricks</u>			
Bricks shall be ordered timeously to obtain uniformity in size and colour			
<u>Pointing</u>			
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc			
Carried to Collection			R
Section No. 2			
Bill No. 2			
MASONRY			
MPENDULO PUBLIC P SCHOOL			
PROVISIONAL BILLS OF QUANTITIES			

Samples

Samples of all masonry building units, except those of walls described as "loadbearing", shall consist of a minimum of 6 units. Samples of building units to be used in walls described as "loadbearing" shall consist of 30 units from every 30 000 units delivered to site

Trade names

Where trade names are specified it will read "or equal approved"

Carried to Collection

R

Section No. 2

Bill No. 2

MASONRY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

BRICKWORK IN SUPERSTRUCTURE**Brickwork of NFP bricks (14 MPa nominal compressive strength) in Class II mortar:**

1	Half brick walls.	m2	16
2	One brick walls.	m2	10

BRICKWORK AND BLOCKWORK SUNDRIES**Bagging and sealing the outer face of the inner skin of walls with 1:3 cement and sand mixture and seal with two coats "Brixal" bitumen emulsion waterproofing coating:**

3	To walls (Provisional).	m2	15
---	-------------------------	----	----

Galvanized brickwork reinforcement

4	115mm Wide reinforcement built in horizontally	m	54
5	230mm Wide reinforcement built in horizontally.	m	15

Sundries:

6	Cutting toothings and bonding new brickwork to existing.	m2	2
---	--	----	---

Galvanised wire ties etc:

7	30 x 2mm Galvanized roof tie 1500mm long with one end fixed to timber and other built into brickwork or concrete.	No	90
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Cramps, ties, etc:

8	30 x 2mm Galvanized door frame tie 350mm long with one end fixed to timber and other built into or shot nailed to brickwork or concrete.	No	12
---	--	----	----

Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc:All to be sanded to remove sharp edges and cut marks. The corners to be cut at 45 degrees- 1.5 x 1.5mm corner.

9	15 x 150mm Wide sills set flat and slightly projecting.	m	2
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Carried to Collection**R**

Section No. 2

Bill No. 2

MASONRY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

FACE BRICKWORK

Facebricks (FBS) prime cost of R7,000.00 per thousand excluding VAT delivered to the site pointed with square ruled recessed horizontal and vertical joints:

1	Extra over brickwork for face brickwork externally.	m2	26
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Carried to Collection

R

Section No. 2

Bill No. 2

MASONRY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Carried to Collection

R

Section No. 2
Bill No. 2
MASONRY
MPENDULO PUBLIC P SCHOOL
PROVISIONAL BILLS OF QUANTITIES

Section No. 2

Bill No. 2

MASONRY

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

58

59

60

61

62

Carried Forward to Summary of Section No. 2

R

Section No. 2

Bill No. 2

MASONRY

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No	Quantity	Rate	Amount
<u>BILL No. 3</u>			
<u>WATERPROOFING</u>			
<u>Note:</u>			
For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary products in descriptions:</u>			
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.			
<u>Waterproofing</u>			
The product and its methodology for application must be approved by Principal Agent before it is used.			
It is a mandatory requirement for the Contractor to attend training to be provided by Supplier. Proof of attendance will be required prior to application of the approved waterproofing product.			
Contractor must prepare a 1m x 1m sample in the presence of the Principal Agent or Engineer. In this case, the Contractor must give at least 48 hours notice prior to the date when the application of the waterproofing product is intended to be done.			
Contractor to provide a Letter of Compliance confirming that waterproofing has been applied as per Manufacturer's instructions and data sheet.			
Carried to Collection			R
Section No. 2			
Bill No. 3			
WATERPROOFING			
MPENDULO PUBLIC P SCHOOL			
PROVISIONAL BILLS OF QUANTITIES			

WATERSTOPS, SEALING STRIPS, JOINT SEALANTS, ETC.**JOINT SEALANTS ETC****Clear Neutral silicone sealant:**

- | | | | | | |
|---|--|---|-----|--|--|
| 1 | In joint sealing and pointing all round external window and door frames. | m | 253 | | |
|---|--|---|-----|--|--|

Carried to Collection

R

Section No. 2

Bill No. 3

WATERPROOFING

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Section No. 2

Bill No. 3

WATERPROOFING

COLLECTION

Total Brought Forward from Page No.

**Page
No**

64

65

Amount**Carried Forward to Summary of Section No. 2**

R

Section No. 2

Bill No. 3

WATERPROOFING

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No	Quantity	Rate	Amount
<u>BILL No. 4</u>			
<u>ROOF COVERINGS</u>			
<u>Note:</u>			
For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Flashings</u>			
Flashings shall be approved by roof sheeting manufacturer and fixed to the sheeting with S10 clips to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from the manufacturer. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surface in order to prevent steel splatter from penetrating colour coated areas. The flashings shall be supplied with a paint finish consisting of a full top coat silicon modified polyester Colour : White to one side			
<u>Quality Assurance</u>			
The manufacturer shall be assessed and certified as complying with ISO 9001: 2008 Quality Management System			
<u>Guarantee</u>			
Z200 Galvanized Metal or equal approved sheeting shall be laid in strict accordance with manufacturer's specifications by an approved contractor. The employer shall be provided with a ten year written guarantee on materials by the manufacturer.			
Carried to Collection			R
Section No. 2 Bill No. 4 ROOF COVERINGS, ETC. MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES			

Safety

The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity

Handling and Storage

The contractor shall ensure that all materials used on site for cladding, etc are transported, handled and stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction

Inspection Prior to Installation or Erection

Before commencing with installation, the contractor shall verify that the following items have been checked and accepted:

- a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted
- b. Purlins and sheeting rails are at the correct spacing and are within the specified tolerances
- c. The corners of the roof are square and the wall framework is perpendicular or as specified
- d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework
- e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square
- f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or so dealt with that direct contact with the sheeting is avoided
- g. The contact faces between the purlins or the girts and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding

Carried to Collection

R

Section No. 2

Bill No. 4

ROOF COVERINGS, ETC.

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Protrusion through Sheeted Surfaces

Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugation

Cleaning of Roofs, etc

All debris, etc arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners and sealants, mandrels from pop rivets, off-cuts of flashings and sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, downpipes, etc

Carried to Collection

Section No. 2

Bill No. 4

ROOF COVERINGS, ETC.

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

R

EXISTING ROOF COVERINGSRoof coverings

- | | | | |
|---|---|----|-----|
| 1 | The Contractor is to allow hereunder for the thorough inspection of the insitu corrugated iron roof coverings, ridge cappings, accessories, etc. to ensure water tightness and complete integrity thereof including for replacement of missing drive screws, etc. | m2 | 242 |
|---|---|----|-----|

PROFILED SHEETING OF METAL, FIBRE CEMENT, PLASTIC, ETC.**0.58mm Thick Z200 "IBR Profile" galvanised metal roof sheeting, in single sheet lengths, with "Chromadek" finish to external face and standard backing coat to internal face :**

- | | | | |
|---|--|----|-----|
| 2 | Roof sheeting laid in patches to a pitch not exceeding 25° and secured to timber purlins at approximately 1 200mm centres including turning up sheet at ridge and turning down sheet at eaves. | m2 | 184 |
| 3 | Roof sheeting laid to a double-pitch. | m2 | 954 |
| 4 | Roof sheeting laid to a mono-pitch. | m2 | 143 |

0.58mm Flashings pre-painted to match roof sheeting and fixed in strict accordance with manufacturer's instructions:

- | | | | |
|---|--|---|-----|
| 5 | Double pitched ridge capping with 225mm lapping secured onto the roof. | m | 153 |
|---|--|---|-----|

ROOF AND WALL INSULATION**"Sisalation Grade FR430" or equal approved heavy industrial insulation**

- | | | | |
|---|--|----|-------|
| 6 | Insulation laid taut over roof trusses (at approximately 1 100mm centres) and fixed concurrent with SA Pine purlins at 900mm centres, etc including galvanised steel straining wires | m2 | 1,138 |
|---|--|----|-------|

Carried to Collection

R

Section No. 2

Bill No. 4

ROOF COVERINGS, ETC.

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 2

Bill No. 4

ROOF COVERINGS, ETC.

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

67

68

69

70

Carried Forward to Summary of Section No. 2

R

Section No. 2

Bill No. 4

ROOF COVERINGS, ETC.

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No	Quantity	Rate	Amount
<u>BILL No. 5</u>			
<u>CARPENTRY AND JOINERY</u>			
<u>Note:</u>			
For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary products in descriptions:</u>			
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.			
<u>Prefabricated roof trusses:</u>			
Prefabricated timber roof trusses shall be constructed of South African pine by a firm of specialist designer manufacturer's as approved by the Architect.			
Prices must include for all cross and windbracing according to the manufacturer's instruction.			
Prices must include for the design, plans and approval of all timber trusses and no claim shall be considered.			
Pre-fabricated timber roof trusses shall comply with the requirements of SABS Specification 0163 and be constructed of South African pine as described in clause 8.5 to the designs shown on the Manufacturer's detail drawings. The timber shall be of cross-sectional dimensions shown, cut to correct lengths with ends square or at the required angle.			
Carried to Collection			R
Section No. 2 Bill No. 5 CARPENTRY AND JOINERY MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES			

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.

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.

In coastal areas connector plates in buildings without ceilings shall be painted with two coats of epoxy tar complying with SABS Specification 801 Type 2, or rust neutralising paint.

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 Institute 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.

Carried to Collection

Section No. 2

Bill No. 5

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

R

- (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 branderling to ceilings shall be according to Subclauses 7.6.1 and 7.6.2 and Clauses 7.8, 7.9 and 9.5.
- (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, transomes, mullions, rails, etc.

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

Carried to Collection

R

Section No. 2

Bill No. 5

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

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**Sawn softwood:**

1	38 x 114mm Wall plate.	m	200
2	38 x 228mm Gang boarding. (Provisional).	m	17
3	50 x 76mm Purlins.	m	1,274

Wrought softwood:

4	25 x 120mm Member with chamfer to one end.	m	20
5	76 x 228mm Beam.	m	36
6	76 x 152mm Rafters.	m	33
7	50 x 76mm Purlins.	m	20
8	50 x 76mm Bearer fascia support (Provisional).	m	20

Sundries:

9	MiTek® eCo hurricane clip fixed using Permfix nails or bolts through pre-drilled holes.	No	358
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PREFABRICATED ROOF TRUSSES, ETC.

Carried to Collection

R

Section No. 2

Bill No. 5

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Prefabricated timber roof trusses shall be constructed of South African pine by a firm of specialist designer manufacturers. Trusses to be a minimum of 1200mm centres and are to support metal roof covering. Ceilings are either gypsum plasterboard or claddit (suspended or fixed). Prices must include for the design , plans and approval of all timber trusses and no claim shall be considered. An Engineers approval certificate is required once the roof truss installation is complete and is for the contractors account. TREATED Prefabricated timber trusses to be 'Design & Supply' and fixings/ tie downs onto external brickwork to be in line with Structural Engineers details & specifications. Contractor to supply 2 certificates after erection of roof trusses: 1) from manufacturer that all have been manufactured in accordance 2) from roof truss engineer that roof has been erected & fixed in accordance with suppliers drawings. NOTE: all exposed timber/ timber areas in contact with concrete/ timber areas in contact with brickwork to be treated at ground level BEFORE been erected into position at higher levels

Allow for the manufacture of plate nailed timber roof trusses and delivery to site:

1	Provide the Prime Cost Sum of R 195,000.00 (One Hundred and Ninety Five Thousand Rand) for roof trusses delivered to site.	Item	195,000.00
2	Allow for bracing, cross bracing, connecting clips, fixing brackets, hurricane clips, etc., as required for fixing in position of roof trusses as described in accordance with the manufacturer's instructions.	Item	

EAVES, VERGES, ETC

"Everite Nutec" or equal approved fibre cement

3	12 x 225mm Fascia board drilled and brass screwed to rafter feet including galvanised steel H-profile jointing strips, etc.	m	307
4	85 x 275 x 6mm Barge board drilled and brass screwed to purlin ends including galvanised steel H-profile jointing strips, screws, holes, etc.	m	110

DOORS ETC

Carried to Collection

R

Section No. 2

Bill No. 5

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

<u>Approved semi-solid flush doors, with Commercial veneer both sides and with hardwood edge strips, tongued and grooved on to edges:</u>					
1	44mm Thick, single flush door, size 813 x 2,032mm high.	No	24		
<u>Wrought meranti doors:</u>					
2	44mm Thick, framed, ledged, braced and batten door, formed of 44 x 114mm stiles and top rail, 22 x 114mm middle ledge and braces and 22 x 222mm bottom ledge, the stiles and top rail grooved for and filled in with 22 x 70mm tongued, grooved and V-jointed vertical boarding, with braces brass screwed to every board, size 813 x 2,032mm high.	No	17		
<u>FRAMES AND LININGS (FRAMED)</u>					
<u>Wrot Meranti</u>					
3	69 x 108mm Rebated and angle rounded frame.	m	33		
<u>BEADS, ARCHITRAVES, ETC</u>					
<u>Wrought meranti:</u>					
4	19 x 70mm Skirting fixed to walls including 19mm quadrant bead planted on.	m	283		
<u>Sundries:</u>					
5	38 x 76 mm Chamfered and grooved weatherboard fixed in and including groove or rebate in underside of door.	m	7		
<u>NOTICE BOARDS, PINNING BOARDS, EYBOARDS, DUCKBOARDS, ETC.</u>					
<u>Wrot Meranti</u>					
6	22 x 44mm Rebated surrounds plugged to walls with heads of screws sunk and pelleted.	m	362		
Carried to Collection				R	
Section No. 2					
Bill No. 5					
CARPENTRY AND JOINERY					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

Bitumen impregnated fibre board:

- | | | | |
|---|--|----|-----|
| 1 | 12mm Insulation board backing plugged and glued to wall with an approved adhesive, including all square cutting and waste. | m2 | 178 |
|---|--|----|-----|

SHELVING**Wrought laminated softwood:**

- | | | | |
|---|--|----|----|
| 2 | 19mm Thick laminated wrot S A pine shelving with rounded edges on front side, screwed to brackets (elsewhere). | m2 | 15 |
|---|--|----|----|

Carried to Collection

R

Section No. 2

Bill No. 5

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 2

Bill No. 5

CARPENTRY AND JOINERY

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

72

73

74

75

76

77

78

Carried Forward to Summary of Section No. 2

R

Section No. 2

Bill No. 5

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No		Quantity	Rate	Amount
	<u>BILL No. 6</u>			
	<u>CEILINGS, PARTITIONS AND ACCESS FLOORING</u>			
	<u>Note:</u>			
	For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Proprietary products in descriptions:</u>			
	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.			
	<u>Descriptions:</u>			
	Items described as nailed shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete.			
	Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as bolted the bolts have been given.			
	<u>INTERNAL NAILED UP CEILINGS</u>			
	<u>6,4mm Rhino gypsum plasterboard with H-profile steel jointing strips</u>			
1	Ceilings including 38 x 50mm sawn softwood branderling at 400mm centres with cross branderling at joints, ends of sheets and at light fittings, etc.	m2	939	
	Carried to Collection			
	Section No. 2			
	Bill No. 6			
	CEILINGS, PARTITIONS AND ACCESS FLOORING			
	MPENDULO PUBLIC P SCHOOL			
	PROVISIONAL BILLS OF QUANTITIES			

Trap doors

- | | | | |
|---|---|----|---|
| 1 | Extra over 4mm thick fibre cement board ceiling for forming trap door, size 630 x 630mm in clear, formed with 38 x 50mm sawn S.A. pine framing covered with ceiling boarding and set in 38 x 76mm wrought S.A. pine rebated kerb, including all necessary additional supports, trimmers, etc. | No | 5 |
|---|---|----|---|

Cornices

Paper covered gypsum cornice with skimmed joints plugged to walls including mitres, etc.:

- | | | | |
|---|---------------------|---|-----|
| 2 | 75mm Coved cornice. | m | 564 |
|---|---------------------|---|-----|

Carried to Collection

R

Section No. 2

Bill No. 6

CEILINGS, PARTITIONS AND ACCESS FLOORING

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 2

Bill No. 6

CEILINGS, PARTITIONS AND ACCESS FLOORING

COLLECTION

Total Brought Forward from Page No.

**Page
No**

80

81

Amount**Carried Forward to Summary of Section No. 2****R**

Section No. 2

Bill No. 6

CEILINGS, PARTITIONS AND ACCESS FLOORING

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No		Quantity	Rate	Amount
	<u>BILL No. 7</u>			
	<u>FLOOR COVERINGS, WALL LININGS, ETC.</u>			
	<u>Note:</u>			
	For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Proprietary products in descriptions:</u>			
	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.			
	<u>Cleaning:</u>			
	Rates for floor covering shall include for proper cleaning on completion.			
	<u>FLOOR COVERINGS</u>			
	<u>Vinyl floor coverings</u>			
	<u>300 x 300 x 2,5mm Semi-flexible reinforced vinyl quartz floor tiles</u>			
1	Sealed to prepared floors with adhesive in patches to match existing tiles.	m2	662	
	<u>Polish, sealers, etc.</u>			
	<u>Clean by stripping and sealing and apply three coats water based copolymer emulsion or other approved sealer</u>			
2	On vinyl sheet flooring.	m2	662	
	Carried Forward to Summary of Section No. 2			
	Section No. 2			
	Bill No. 7			
	FLOOR COVERINGS, WALL LININGS, ETC.			
	MPENDULO PUBLIC P SCHOOL			
	PROVISIONAL BILLS OF QUANTITIES			

HINGES:

1	75 x 100mm Brass Medium duty ball bearing HMP butt hinges.	Pairs	24.0
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LOCKS

2	"UNION 2277-78SS" or equal approved three lever sash mortice lockset.	No	16
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SIGN PLATES:

All sign plates are to be with engraved blue perspex all in accordance with the standard sign plates for Schools.

3	Sign plate plugged and screwed to walls with chromium plated dome headed screws.	No	16
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BATHROOM FITTINGS ETC.**Bathroom Accessories:**

4	Brushed finish stainless steel hand dryer, size 241 x 322 x 170mm. 3 x faster hand drying with 20, 000rpm motor speed-10 to 15 seconds drying time. Uses 80% less energy than regular hand dryers with a 1 year carry-in warranty-SABS/NRCS approved	No	6
---	--	----	---

Halcast or equal approved"

5	Thiefproof toilet roll holder plugged.	No	25
---	--	----	----

6	DORMA DDS-SS-017 Floor Mounted Door Stop (Stainless Steel).	No	8
---	---	----	---

Sundries:

7	50mm Plastic key tag.	No	17
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LETTERS, NAMEPLATES, ETC.

Carried to Collection

R

Section No. 2

Bill No. 8

IRONMONGERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

<u>Acrylic door plates:</u>					
1	250 x 40 x 6mm Thick white acrylic door name plate with nine letters size 30mm high, engraved with arial font and painted navy, fixed to door, door frame or wall with double sided adhesive tape (Provisional).	No	17		
<u>Sign plates:</u>					
2	152 x 152 x 2mm Anodised silver engraved sign with Fire Extinguisher Pictogram E06, fixed to wall or door (Union AL5066E-06/2AS).	No	8		
3	152 x 152 x 2mm Anodised silver engraved sign with Directional Pictogram E08, fixed to wall or door (Union AL5066E-08/2AS).	No	3		
<u>PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC</u>					
<u>Lockers</u>					
4	Powder coated "Grey" steel standard two-door stationary cupboard, size 900mm wide x 450mm deep x 1800mm high, provided complete with four shelves, chromium plated locking mechanism, four times bolted to brickwork with and including 10 x 85mm long masonry anchors.	No	8		
<u>Writing boards</u>					
5	"Parrot Products" Educational board with deluxe aluminium perimeter frame, size overall 4890 x 1230mm high, with magnetic chalkboard centre panel fitted with aluminium chalkrail, size 2420 x 1230mm high, two outer fixed leaves, each size 1220 x 1230mm high, two double sided swing leaf panels fitted with heavy duty plastic hinges, each leaf size 1210 x 1230mm high, mounted to wall with and including proprietary wall fixings.	No	8		
<u>Information notice boards</u>					
6	"Parrot Products BD 0476" Information board with felt backing and aluminium perimeter frame, size 2400 x 1200mm high, concealed mounted to wall with proprietary wall fixings.	No	8		
Carried to Collection				R	
Section No. 2					
Bill No. 8					
IRONMONGERY					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

Section No. 2

Bill No. 8

IRONMONGERY

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

84

85

86

Carried Forward to Summary of Section No. 2

R

Section No. 2

Bill No. 8

IRONMONGERY

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

PRE-GALVANISED PRESSED STEEL DOOR FRAMES

Note : In accordance with an instruction from the Department of Public works all door frames and windows are to be galvanised, regardless of the locality of the school

1,6mm Double rebated frames suitable for one brick walls

- | | | | |
|---|-----------------------------------|----|----|
| 1 | Frame for door 813 x 2032mm high. | No | 37 |
|---|-----------------------------------|----|----|

GALVANIZED STEEL WINDOW FRAMES

Industrial type window frames fitted with burglar bars to all opening sections at factory and including a ventilation section:

- | | | | |
|---|--|----|---|
| 2 | Window, size 3300 x 500mm high to suit opening same type as existing . | No | 5 |
|---|--|----|---|

HOT DIP GALVANIZED STEEL GATES

Note: The contractor is to check on site measurements before placing of order.

Security Gate consisting of 25 x 25 x 2mm galvanised mild steel frame with 12mm galvanised mild steel square bars infill placed at 109mm centres, hung with one pair of galvanised mild steel hinges including locks, handles, ironmongery complete and fixed to brickwork:

- | | | | |
|---|---------------------------------------|----|---|
| 3 | Security gate size 900 x 2050mm high. | No | 1 |
|---|---------------------------------------|----|---|

STEEL LOCKERS

Approved standard epoxy powder coated finish lockers, etc. fixed in position strictly in accordance with the manufacturer's specification:

- | | | | |
|---|---|----|---|
| 4 | 1800mm(H) x 300mm(W) x 450mm(D) Single lockers fitted in position complete with top shelf (opening 255mm(H) x 230mm(W) x 420mm(D)) & hangrail below & hasp & staple for padlock facility. Weight 16kg (JS01 - Hammertone grey). | No | 8 |
|---|---|----|---|

Carried to Collection

R

Section No. 2

Bill No. 9

METALWORK

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 2

Bill No. 9

METALWORK

COLLECTION

Total Brought Forward from Page No.

**Page
No**

88

89

Amount**Carried Forward to Summary of Section No. 2**

R

Section No. 2

Bill No. 9

METALWORK

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Cement plaster on brickwork:

1	On walls.	m2	37
2	In narrow widths.	m2	12
3	In plaster band 150mm wide.	m	27

Carried to Collection**R**

Section No. 2

Bill No. 10

PLASTERING

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Section No. 2

Bill No. 10

PLASTERING

COLLECTION

Total Brought Forward from Page No.

**Page
No**

91

92

Amount**Carried Forward to Summary of Section No. 2**

R

Section No. 2

Bill No. 10

PLASTERING

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

250 x 250 non slip Terrazzo floor tiles, with a Prime Cost of R200.00 per square meter, as per Architect, fixed with approved adhesive:

1	On floors.	m2	15
2	Cut tile skirting 100mm high laid with joints aligned.	m	30

Carried to Collection

R

Section No. 2

Bill No. 11

TILING

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 2

Bill No. 11

TILING

COLLECTION

Total Brought Forward from Page No.

**Page
No**

94

95

Amount**Carried Forward to Summary of Section No. 2****R**

Section No. 2

Bill No. 11

TILING

**MPENDULO PUBLIC P SCHOOL
PROVISIONAL BILLS OF QUANTITIES**

Item No	Quantity	Rate	Amount
<u>BILL No. 12</u>			
<u>PLUMBING AND DRAINAGE (PROVISIONAL)</u>			
<u>Note:</u>			
For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary products in descriptions:</u>			
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.			
<u>Copper pipes:</u>			
Pipes shall be hard drawn and half-hard pipes of the class stated. 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. Only compression fittings shall be used in walls or in ground.			
<u>Chasing:</u>			
Chasing pipes into new walls shall be regarded as "building in" and is not measured separately. The cost of chasing, wrapping in suitable bown paper and making good shall be included in the rates for pipes.			
Carried to Collection		R	
Section No. 2 Bill No. 12 PLUMBING AND DRAINAGE MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES			

Holes for pipes through new walls:

No allowance for holes and drilling for pipes through new walls has been made in these bills of quantities, the price for all holes and making good shall be deemed to be included in the description of pipes.

Reducing fittings:

Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch 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 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.

Description of pipes laid in trenches:

Descriptions of pipes laid in trenches shall be deemed to include for carting away all surplus excavated material to a dumping site located by the contractor.

Excavations:

No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.

'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.

Laying, backfilling, bedding, etc of pipes:

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

Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB: Earthworks (Pipe trenches) Clause 5.7.2 will only be applicable if authorised by the Engineer in writing.

Carried to Collection

R

Section No. 2

Bill No. 12

PLUMBING AND DRAINAGE

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Flush pans:

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

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

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

Fixing:

Descriptions of wall mounted, floor standing, drop-in, etc type sanitary fittings shall be deemed to include fixing in position and all fixing accessories.

Descriptions of proprietary items shall include fixing in position and all fixing accessories as specified by the manufacturer.

Waste unions:

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

Sleeve pipes:

Electrical sleeve pipes to be Class 34 and are to include for draw wires.

RAINWATER DISPOSAL (PROVISIONAL):**Watertite or equal approved Aluminium Gutters and Downpipes:**

1	125 x 85 x 0.6mm Ogee domestic gutters including gutter brackets at 600mm centres.	m	307
2	Extra over eaves gutter for stopped end.	No	12
3	Extra over eaves gutter for outlet for 100 x 75mm aluminium downpipe.	No	36
4	100 x 75 x 0.6mm rectangular fluted downpipes fixed to wall with and including proprietary holderbats to 5000L rainwater tanks (elsewhere measured).	m	217

Carried to Collection

R

Section No. 2

Bill No. 12

PLUMBING AND DRAINAGE

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

1	Extra over rainwater downpipe for bends.	No	36		
<u>SANITARY FITTINGS</u>					
<u>Vitreous china:</u>					
<u>Vaal or equal approved:</u>					
2	Orchid back inlet white vitreous china wall hung pan [code 439016] with floor bracket [code 8082Z0] fitted as per manufacturer's specifications and combined with: GEBERIT Kombifix UP172 for wall hung WC, [G110.150.00.1], front actuated with Delta21 dual flush actuator [G115.125.46.1] in matt finish, including flushpipe and Pan connector, water supply connection with angle stop valve, Netting for direct plastering, protection cover for service opening and protection cover for flushpipe, fixed with included fastening materials inside a single solid wall [80mm]	No	21		
<u>WASTE UNIONS ETC</u>					
<u>Waste unions etc:</u>					
3	32mm Chrome plated anti theft plug (code 309-32) with spindle basin waste union.	No	13		
<u>TRAPS ETC</u>					
<u>Traps etc:</u>					
4	40mm Chrome plated deep seal bottle trap with outlet for 40mm PVC (code 365/40).	No	14		
<u>Accessories:</u>					
5	0.8mm thick satin finished thick stainless steel soap dispensers with 1,250ml soap capacity lockable 304 stainless steel casing with manual top-up of soap reservoir plugged and screwed to the wall with stainless steel screws. Brass pump mechanism can also dispense lotions and shampoos.	No	13		
6	Reflex Disposer wall mounted waste bin colour White (code: SA426213), overall size 334 x 258 x 635mm high.	No	7		
Carried to Collection				R	
Section No. 2					
Bill No. 12					
PLUMBING AND DRAINAGE					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

1	Brushed stainless steel toilet roll holders plugged and screwed to the wall with stainless steel screws with sight inspection hole. Capacity of 3 toilet rolls and lockable. Samples to be presented to architect for approval.	No	46
<u>TAPS, VALVES, ETC</u>			
<u>Solid Cast brass taps, valves, etc:</u>			
2	"Cobra KM2-200" or other approved 15mm chrome plated metered bib tap with non-hold open feature and flow controller.	No	18
<u>Sundries, etc:</u>			
3	Standard 15mm stainless steel braided female swivel connection piece 350mm long.	No	23
<u>SANITARY PLUMBING</u>			
<u>PVC waste or vent pipes and fittings:</u>			
4	50mm Waste pipe.	m	140
5	110mm Pipe.	m	100
<u>uPVC gulleys</u>			
6	200mm Precast concrete gully dish and uPVC lowback assembly complete with 110mm P trap gulley (code UGB 40) including 190mm diameter head (code UGA 40) and grate (code UGG 40), not exceeding 750mm deep, jointed to 110mm drain pipe, including excavations for and encasing in concrete (15MPa crushing strength after 28 days) worked up to form kerb, finished smooth on top in 1:3 cement mortar.	No	3
<u>Extra for:</u>			
7	50mm Bend.	No	70
8	50mm Access bend.	No	59
9	110mm Access bend.	No	70

Carried to Collection

R

Section No. 2
 Bill No. 12
 PLUMBING AND DRAINAGE
MPENDULO PUBLIC P SCHOOL
PROVISIONAL BILLS OF QUANTITIES

1	<p><u>Testing:</u></p> <p>Testing waste water pipe system.</p>	Item	
	<p><u>WATER SUPPLIES</u></p>		
	<p><u>Polycop pipes:</u></p>		
	<p>Pipes shall be class 10.</p>		
	<p><u>Fixing of pipes</u></p>		
	<p>Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level</p>		
	<p><u>Polycop pipes chased in walls:</u></p>		
	<p>Where pipes have been chased in walls, the price for making good of plaster and paint etc shall be deemed to be included in the description of pipe chased in walls.</p>		
	<p><u>Reducing fittings:</u></p>		
	<p>Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch 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 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.</p>		
	<p><u>Class 10 Polycop pipes:</u></p>		
2	15mm Pipe building into walls.	m	43
3	22mm Ditto.	m	51
	<p><u>Extra over polycop pipes for compression fittings:</u></p>		
4	15mm Fittings.	No	40
5	22mm Fittings.	No	71
	<p style="text-align: right;">Carried to Collection</p>		R
	<p>Section No. 2 Bill No. 12 PLUMBING AND DRAINAGE MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES</p>		

1	<p><u>Testing:</u></p> <p>Testing water supply pipe system.</p> <p><u>Fire fighting equipment</u></p> <p><u>Portable fire extinguishers:</u></p>	Item		
2	<p>4.5 Kg carbondioxide portable fire extinguisher complete with full load, wall hook and bracket, bracket fixed to and including 25 mm wrot Meranti backboard, size 100 x 520mm high with chamfered edges, varnished and fixed to wall.</p>	No	8	
	<p style="text-align: right;">Carried to Collection</p>		R	
	<p>Section No. 2 Bill No. 12 PLUMBING AND DRAINAGE MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES</p>			

Section No. 2

Bill No. 12

PLUMBING AND DRAINAGE

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

97

98

99

100

101

102

103

Carried Forward to Summary of Section No. 2

R

Section No. 2

Bill No. 12

PLUMBING AND DRAINAGE

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

6mm Float Glass Silvered Back Mirror With Polished Edges, Four Times Holed For And Screwed To Plugs In Wall With Chromium Plated Dome Headed Screws And Cork Washers At Back

1	Mirror size 400 x 600mm.	No	9		
	<u>Sundries</u>				
2	Rake out putty from galvanised steel window frame and replace with new.	m	20		

Carried to Collection

R

Section No. 2

Bill No. 13

GLAZING

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 2

Bill No. 13

GLAZING

COLLECTION

Total Brought Forward from Page No.

**Page
No**

105

106

Amount**Carried Forward to Summary of Section No. 2****R**

Section No. 2

Bill No. 13

GLAZING

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Prepare and apply three coats polyurethane matt varnish on:

1	Doors (all surfaces measured).	m2	291
2	Frames, skirtings, rails, etc not exceeding 300mm girth.	m	283

ON METAL

Clean down thoroughly with galvanised iron cleaner, wash down with water, prime with one coat galvanised metal primer and finish with two coats superior universal non drip enamel on:

3	On Door frames.	m2	54
4	Exterior gates, grilles, burglar screens, balustrades, etc. (both sides measured over the full flat area).	m2	4
5	Windows with burglar bars (both sides measured).	m2	17

RENOVATIONS

ON PLASTER, etc

Sand down thoroughly down existing paint, prepare patch and paint one coat approved primer, one undercoat and two coats premium quality Acrylic paint (PVA) interior use on :

6	Existing external plastered or bagged walls	m2	367
7	Existing internal plastered or bagged walls	m2	184

ON FIBRE CEMENT OR RHINOBAORD

Strip old flaking paint, prepare surfaces, treat defects with all purpose adhesive filler, apply 1 coat plaster primer thinned 5 parts to 1 part Mineral Turpentine and repaint with 2 coats superior acrylic PVA:

8	On sills.	m2	109
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ON METAL

Carried to Collection

R

Section No. 2

Bill No. 14

PAINTWORK

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Sand down thoroughly existing paint, prepare and paint one coat Zinc Chromate primer, one universal undercoat and two coats high gloss enamel paint on :

1	On Door frames.	m2	6
2	Windows with burglar bars (both sides measured).	m2	924
3	Exterior gates, grilles, burglar screens, balustrades, etc. (both sides measured over the full flat area).	m2	59

ON TIMBER

Strip old flaking paint, prepare surfaces and clean with degreaser, treat defects with all purpose adhesive filler, and prepare for and paint 1 universal undercoat and 2 coats quality universal enamel:

4	On doors (all surfaces measured).	m2	5
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Carried to Collection

R

Section No. 2

Bill No. 14

PAINTWORK

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 2

Bill No. 14

PAINTWORK

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

108

109

110

Carried Forward to Summary of Section No. 2

R

Section No. 2

Bill No. 14

PAINTWORK

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

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Item No	Quantity	Rate	Amount
<u>SECTION No. 2 - NEW BUILDINGS</u>			
<u>BILL No. 1</u>			
<u>EARTHWORKS (PROVISIONAL)</u>			
<p>The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (1999 Edition), the Department of Public Works document No. OW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.</p>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary products in descriptions:</u>			
<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>			
<u>Nature of material to be excavated:</u>			
<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>			
<u>Carting away of excavated material:</u>			
<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			R
<p>Section No. 3 Bill No. 1 EARTHWORKS MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES</p>			

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, ETC**Site clearance etc:**

1	Allow for clearing the area of the site to be built upon of all grass, weeds, shrubs, trees with trunks not exceeding 200mm girth, debris, etc., including grubbing up all roots, scoffling up as required and cart away all vegetation and debris.	m2	413
---	---	----	-----

Excavation in earth not exceeding 2m deep:

2	Trenches.	m3	126
3	Bases.	m3	5
4	Reduced levels under floors.	m3	95

Extra over trench and hole excavations in earth for excavation in:

5	Soft rock.	m3	26
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Carried to Collection

R

Section No. 3

Bill No. 1

EARTHWORKS

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

1	Hard rock.	m3	13
	<u>Extra over all excavations for carting away:</u>		
2	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m3	140
	<u>Risk of collapse of excavations:</u>		
3	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	417
	<u>Keeping excavations free of water:</u>		
4	Keeping excavations free from mud and all water including subterranean sources.		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>		
5	Backfilling to trenches, holes, etc.	m3	64
6	Under floors, steps, pavings, etc.	m3	28
	<u>Earth filling supplied by the contractor compacted to 95% Mod AASHTO density:</u>		
7	Under floors, steps, pavings, etc.	m3	163
	<u>Coarse river sand filling supplied by the contractor:</u>		
8	Under floors etc. (Provisional).	m3	10
	<u>Compaction of surfaces:</u>		
9	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	318
	<u>Prescribed density tests on filling:</u>		
10	Allow for compaction tests by an approved laboratory to determine density of filling material.	No	3

Carried to Collection

R

Section No. 3

Bill No. 1

EARTHWORKS

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 3

Bill No. 1

EARTHWORKS

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

113

114

115

Carried Forward to Summary of Section No. 3**R**

Section No. 3

Bill No. 1

EARTHWORKS

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Rate

Amount

CONCRETE, FORMWORK AND REINFORCEMENT

SUPPLEMENTARY PREAMBLES

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.

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).

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.

R

-117-

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.

UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES

15MPa/20mm concrete:

1	Footings to walls (Provisional).	m3	32
2	Surface beds on waterproofing.	m3	0.3

20MPa/20mm concrete:

3	Surface beds on waterproofing.	m3	20
4	Surface beds cast in panels on waterproofing.	m3	11
5	Bases (Provisional).	m3	7

REINFORCED CONCRETE CAST ON FORMWORK

30MPa/20mm concrete:

6	Slabs, including beams and inverted beams.	m3	0.2
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CONCRETE TESTS

Carried to Collection

R

Section No. 3

Bill No. 2

**CONCRETE, FORMWORK AND REINFORCEMENT
MPENDULO PUBLIC P SCHOOL
PROVISIONAL BILLS OF QUANTITIES**

Test blocks:

- | | | | |
|---|---|----|---|
| 1 | Making and testing set of three 150x150x150mm concrete strength test cubes (Provisional). | No | 2 |
|---|---|----|---|

CONCRETE SUNDRIES**Finishing top surfaces of concrete smooth with a wood float:**

- | | | | |
|---|------------------------|----|----|
| 2 | Surface beds to falls. | m2 | 28 |
|---|------------------------|----|----|

Finishing top surfaces of concrete to an evenly ribbed non-slip surface (broom finish):

- | | | | |
|---|------------------------|----|-----|
| 3 | Surface beds to falls. | m2 | 123 |
|---|------------------------|----|-----|

ROUGH FORMWORK (DEGREE OF ACCURACY III) (CPAP Work Group No 111)**Rough Formwork to Sides and Soffits:**

- | | | | |
|---|---|----|---|
| 4 | Slabs propped up not exceeding 3,5m high. | m2 | 2 |
|---|---|----|---|

Smooth Formwork to Sides:

- | | | | |
|---|---|---|----|
| 5 | Edges, risers, ends and reveals not exceeding 300mm high or wide. | m | 67 |
|---|---|---|----|

MOVEMENT JOINTS ETC**Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:**

- | | | | |
|---|---|---|-----|
| 6 | 10mm Joints not exceeding 300mm high (Provisional). | m | 106 |
|---|---|---|-----|

Approved polysulphide sealing compound including backing cord, bond breaker, primer etc.:

- | | | | |
|---|---|---|-----|
| 7 | 10 x 10mm In vertical expansion joints between concrete and brick surfaces, including raking out expansion joint filler as necessary (Provisional). | m | 106 |
|---|---|---|-----|

Carried to Collection

R

Section No. 3

Bill No. 2

CONCRETE, FORMWORK AND REINFORCEMENT

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Vertical construction joints through concrete including thick cement slurry to one face:

1	Surface beds not exceeding 300mm thick.	m	62
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REINFORCEMENT (PROVISIONAL)

Fabric reinforcement:

2	REF. 193 fabric reinforcement in concrete surface beds, slabs, etc.	m2	195
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High tensile steel reinforcement to structural concrete work:

3	16mm Diameter bars.	kg	36
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Carried to Collection

R

Section No. 3

Bill No. 2

CONCRETE, FORMWORK AND REINFORCEMENT

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 3

Bill No. 2

CONCRETE, FORMWORK AND REINFORCEMENT

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

117

118

119

120

Carried Forward to Summary of Section No. 3**R**

Section No. 3

Bill No. 2

CONCRETE, FORMWORK AND REINFORCEMENT

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Concrete masonry units:

Blocks are to be either solid or hollow modular dense concrete masonry units having a compressive strength of 7 MPa.

Wall ties for blockwork:

Wall ties shall be polypropylene "Permaties" complying with BS 76377. Ties for hollow walls shall be of sufficient length to allow not less than 75mm of each end to be built into the blockwork. Ties are to be spaced at intervals of not more than 1m in the horizontal direction and not more than 400mm staggered in the vertical direction except at openings, vertical joints or ends of walls where they are to be placed vertically above each other.

Blockwork:

Blockwork shall comply with SABS 0145 "Concrete Masonry Construction".

Surfaces shall have joints raked out to a depth of at least 10mm and pointed on exposed surfaces. Cavities of hollow walls shall be kept free of mortar droppings or other undesirable matter. Every second perpend of the bottom course of the external skin of hollow walls shall be left open as a weep hole.

Standard complementary blocks:

Descriptions of blockwork shall be deemed to include standard complementary blocks such as corner, three-quarter, half and quarter blocks required in the construction of corners, reveals, jambs, ends, etc to solid and hollow walls and for bonding as necessary.

**BRICKWORK IN FOUNDATIONS
(PROVISIONAL)****Brickwork of NFX bricks (14 MPa nominal
compressive strength) in Class I mortar:**

1	Half brick walls.	m2	28
2	One brick walls.	m2	165

Carried to Collection

R

Section No. 3

Bill No. 4

MASONRY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

1	Mass brickwork in piers.	m3	1
<u>BRICKWORK IN SUPERSTRUCTURE</u>			
<u>Brickwork of NFP bricks (14 MPa nominal compressive strength) in Class II mortar:</u>			
2	Half brick walls.	m2	41
3	Half brick walls in beamfilling.	m2	60
4	One brick walls.	m2	301
5	Mass brickwork in piers.	m3	1
<u>Bagging and sealing the outer face of the inner skin of walls with 1:3 cement and sand mixture and seal with two coats "Brixal" bitumen emulsion waterproofing coating:</u>			
6	To walls (Provisional).	m2	325
<u>Joint forming material in movement joints:</u>			
7	12mm Bitumen impregnated fibre board built in vertically or horizontally between brick skins, concrete, etc (Provisional).	m2	4
<u>Approved polysulphide sealing compound including backing cord, bond breaker, primer etc.:</u>			
8	10 x 12mm In expansion joints in walls including raking out expansion joint filler as necessary (Provisional).	m	12
<u>Brickwork reinforcement:</u>			
9	75mm Wide reinforcement built in horizontally.	m	498
10	Ditto, but in foundations (Provisional).	m	190
11	150mm Wide reinforcement built in horizontally.	m	883
12	Ditto, but in foundations (Provisional).	m	580
<u>Prestressed fabricated lintels:</u>			
13	110 x 75mm Lintels in lengths not exceeding 3m.	m	80

Carried to Collection

R

Section No. 3

Bill No. 4

MASONRY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

<u>Turning pieces:</u>					
1	100mm Wide turning piece to lintels etc.	m	74		
2	200mm Wide turning piece to lintels etc.	m	6		
<u>Galvanised wire ties etc:</u>					
3	4mm Diameter roof tie 2m girth bent double, with one end built into brick/blockwork and other end fixed to timber.	No	97		
<u>Cramps, ties, etc:</u>					
4	30 x 2mm Galvanized door frame tie 350mm long with one end fixed to timber and other built into brickwork or concrete.	No	36		
5	10mm Threaded galvanized rod built through walls.	m	2		
6	Extra over threaded bolt for nut and washer.	No	12		
<u>Air bricks etc:</u>					
7	229 x 152mm terracotta clay vermin proof air brick.	No	10		
<u>Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc:</u>					
8	12 x 60mm Wide sills set flat and slightly projecting.	m	3		
9	12 x 120mm Wide sills set flat and slightly projecting.	m	10		
10	15 x 150mm Wide sills set flat and slightly projecting.	m	21		
<u>Sundries:</u>					
11	Building ends of timber beams into brick walls and caulk with cement mortar.	No	2		
<u>FACE BRICKWORK</u>					
Carried to Collection				R	
Section No. 3					
Bill No. 4					
MASONRY					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

Facebricks (FBS) prime cost of R7 000.00 per thousand excluding VAT delivered to the site pointed with square ruled recessed horizontal and vertical joints:

1	Extra over brickwork for face brickwork externally.	m2	397
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2	Ditto, but in foundations (Provisional).	m2	55
---	--	----	----

Brick-on-edge header course copings, sills, etc with recessed joints on all exposed faces:

3	220mm Wide header course to top of one brick wall bedded and jointed in cement mortar and pointed on top and both sides as described.	m	44
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4	220mm Wide lintel pointed on face and 110mm soffit.	m	36
---	---	---	----

5	220mm Brick on edge sill bedded sloping and jointed in cement mortar and pointed on top, edge and projecting soffit including cutting and fitting between reveals and splay cutting brickwork under.	m	21
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Carried to Collection

R

Section No. 3

Bill No. 4

MASONRY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 3

Bill No. 4

MASONRY

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

123

124

125

126

127

Carried Forward to Summary of Section No. 3

R

Section No. 3

Bill No. 4

MASONRY

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No	Quantity	Rate	Amount
<u>BILL No. 6</u>			
<u>ROOF COVERINGS</u>			
<u>Note:</u>			
For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Flashings</u>			
Flashings shall be approved by roof sheeting manufacturer and fixed to the sheeting with S10 clips to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Flashing flanges shall be notched to the sheet profile where necessary. All these operations must be performed with special tools available from the manufacturer. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surface in order to prevent steel splatter from penetrating colour coated areas. The flashings shall be supplied with a paint finish consisting of a full top coat silicon modified polyester Colour : White to one side			
<u>Quality Assurance</u>			
The manufacturer shall be assessed and certified as complying with ISO 9001: 2008 Quality Management System			
<u>Guarantee</u>			
Z200 Galvanized Metal or equal approved sheeting shall be laid in strict accordance with manufacturer's specifications by an approved contractor. The employer shall be provided with a ten year written guarantee on materials by the manufacturer.			
Carried to Collection			R
Section No. 3 Bill No. 6 ROOF COVERINGS ETC. MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES			

Safety

The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity

Handling and Storage

The contractor shall ensure that all materials used on site for cladding, etc are transported, handled and stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction

Inspection Prior to Installation or Erection

Before commencing with installation, the contractor shall verify that the following items have been checked and accepted:

- a. The entire structure or the portion thereof to be sheeted has been correctly aligned, levelled and grouted
- b. Purlins and sheeting rails are at the correct spacing and are within the specified tolerances
- c. The corners of the roof are square and the wall framework is perpendicular or as specified
- d. No protrusions such as bolt heads, splice plates, cleats, etc. appear on the face of the framework
- e. All members to which roofing and cladding are to be fixed in aesthetically sensitive areas are true and square
- f. Paint and any other materials that may be incompatible with the sheeting, have been painted over or so dealt with that direct contact with the sheeting is avoided
- g. The contact faces between the purlins or the girts and the cladding are in the same plane. Should the alignment be inadequate, the contractor shall request instructions from the engineer before proceeding with the fixing of the cladding

Carried to Collection

R

Section No. 3

Bill No. 6

ROOF COVERINGS ETC.

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Protrusion through Sheeted Surfaces

Protrusions such as pipes, ducts and the like, shall be adequately flashed where they pass through the sheeting surface. Where ribs have to be cut away to permit penetration, additional framing is to be installed as required to support the sheeting. Depending on the position of the penetration through the roof, special attention shall be given to back flashing the sheeting to the ridge or point of water entry. In all cases, all cutting and flashings shall be so arranged that adequate provision is made for the drainage of all troughs and corrugation

Cleaning of Roofs, etc

All debris, etc arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners and sealants, mandrels from pop rivets, off-cuts of flashings and sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters. Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, downpipes, etc

Carried to Collection

Section No. 3

Bill No. 6

ROOF COVERINGS ETC.

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

R

RIBBED SHEETING AND ACCESSORIES**PROFILED SHEETING OF METAL, FIBRE CEMENT, PLASTIC, ETC.**

0.58mm Thick Z200 "IBR Profile" galvanised metal roof sheeting, in single sheet lengths, with "Chromadek" finish to external face and standard backing coat to internal face :

- | | | | |
|---|--|----|-----|
| 1 | Roof covering with pitch not exceeding 25 degrees. | m2 | 384 |
| 2 | Raking cutting and waste. | m | 126 |

0.58mm Flashings pre-painted to match roof sheeting and fixed in strict accordance with manufacturer's instructions:

- | | | | |
|---|---|---|----|
| 3 | Ridge 460mm girth with minimum 230mm laps, fixed to roof sheeting (measured net). | m | 11 |
| 4 | Hip capping 550mm girth, three times bent along girth and notched on site to suit roof profile. | m | 55 |

SHEET METAL FLASHINGS, LININGS, COPINGS, ETC

0.8mm Galvanised sheet steel:

- | | | | |
|---|--|----|---|
| 5 | Linings to valleys with riveted and sealed joints. | m2 | 8 |
|---|--|----|---|

ROOF AND WALL INSULATION

"Sisalation Grade FR430" or equal approved heavy industrial insulation

- | | | | |
|---|--|----|-----|
| 6 | Insulation laid taut over roof trusses (at approximately 100mm centres) and fixed concurrent with SA Pine purlins at 900mm centres, etc including galvanised steel straining wires | m2 | 384 |
|---|--|----|-----|

Carried to Collection

R

Section No. 3

Bill No. 6

ROOF COVERINGS ETC.

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 3

Bill No. 6

ROOF COVERINGS ETC.

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

130

131

132

133

Carried Forward to Summary of Section No. 3

R

Section No. 3

Bill No. 6

ROOF COVERINGS ETC.

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

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.

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.

In coastal areas connector plates in buildings without ceilings shall be painted with two coats of epoxy tar complying with SABS Specification 801 Type 2, or rust neutralising paint.

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 Institute 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.

Carried to Collection

Section No. 3

Bill No. 7

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

R

- (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 branderling to ceilings shall be according to Subclauses 7.6.1 and 7.6.2 and Clauses 7.8, 7.9 and 9.5.
- (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, transomes, mullions, rails, etc.

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

Carried to Collection

R

Section No. 3

Bill No. 7

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

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**Sawn softwood:**

1	38 x 114mm Wall plate.	m	81
2	38 x 228mm Gang boarding (Provisional).	m	18

Wrought softwood:

3	50 x 76mm Bearer fascia support (Provisional).	m	82
---	--	---	----

Sundries:

4	MiTek® eCo hurricane clip fixed using Permfix nails or bolts through pre-drilled holes.	No	142
5	Fix only bolt through average 38mm softwood including drilling hole.	No	37
6	Fix only bolt through average 70mm softwood including drilling hole.	No	81

Laminated S. A. pine:

7	75 x 150mm beam.	m	31
8	75 x 228mm beam.	m	6

PREFABRICATED ROOF TRUSSES, ETC.

Carried to Collection

R

Section No. 3

Bill No. 7

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Prefabricated timber roof trusses shall be constructed of South African pine by a firm of specialist designer manufacturers. Trusses to be a minimum of 1200mm centres and are to support metal roof covering. Ceilings are either gypsum plasterboard or claddit (suspended or fixed). Prices must include for the design, plans and approval of all timber trusses and no claim shall be considered. An Engineers approval certificate is required once the roof truss installation is complete and is for the contractors account.

Plate nailed timber roof truss construction:

Note: Tenderers are referred to the Architects roof plan drawings annexed to these bills of quantities / accompanying these bills of quantities for tender purposes. Specifications and calculations of prefabricated roof must be supplied by the contractor on award of the contract. Descriptions (prices) shall be deemed to include design.

- | | | |
|---|---|------|
| 1 | Roof construction to double pitched roof with three hipped ends, 25.82 x 15.29m overall 'L' shaped on plan having 22.5° pitch, including trusses, jack rafters, permanent bracing and 50 x 76mm purlins at 1000mm centres for roof covering (wall plates elsewhere measured). | Item |
| 2 | Allow for bracing, cross bracing, connecting clips, fixing brackets, hurricane clips, etc., as required for fixing in position of roof trusses as described in accordance with the manufacturer's instructions. | Item |
| 3 | Roof construction to double pitched roof (undercover play area) with two hipped ends, 5,200 x 5,200mm overall, square shaped on plan having 22.5° pitch, including trusses, jack rafters, permanent bracing and 50 x 76mm purlins at 1000mm centres for roof covering (wall plates elsewhere measured). | Item |
| 4 | Allow for bracing, cross bracing, connecting clips, fixing brackets, hurricane clips, etc., as required for fixing in position of roof trusses as described in accordance with the manufacturer's instructions. | Item |

Carried to Collection

R

Section No. 3

Bill No. 7

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

	<u>Wrought S.A. Pine.</u>				
1	Extra over for wrought purlins at eaves and veranda's.	m	155		
	<u>EAVES, VERGES, ETC</u>				
	<u>Pressed fibre-cement:</u>				
2	12 x 225mm Fascia board three times drilled, and brass screwed to and including 38 x 50 x 114mm long S.A. Pine cleats twice brass screwed to rafter foot including galvanised steel H-profile jointing strips, screws, holes etc.	m	82		
	<u>DOORS ETC</u>				
	<u>Approved semi-solid flush doors, with Commercial veneer both sides and with hardwood edge strips, tongued and grooved on to edges:</u>				
3	44mm Thick, single flush door, size 813 x 2,032mm high.	No	1		
	<u>Wrought meranti doors:</u>				
4	44mm Thick, framed, ledged and batten door, formed of 50 x 114mm stiles and top rail, 25 x 114mm middle ledge and braces and 25 x 228mm bottom ledge, the stiles and top rail grooved for and filled in with 22 x 70mm tongued, grooved and V-jointed vertical boarding, size 813 x 550mm high.	No	6		
5	44mm Thick, framed, ledged, braced and batten louvre door, formed of 44 x 114mm stiles and top rail, 22 x 114mm middle ledge and braces and 22 x 222mm bottom ledge, the stiles and top rail grooved for and filled in with 22 x 70mm tongued, grooved and V-jointed vertical boarding, with brace brass screwed to every board, and the bottom filled in with horizontal louvres, size 813 x 2,032mm high.	No	2		
6	44mm thick framed, ledged and battened open back hardwood opening in stable door, with grooved and V-jointed vertical boarding, with braces brass screwed to every board, size 813 x 2032mm high.	No	1		
	Carried to Collection			R	
	Section No. 3				
	Bill No. 7				
	CARPENTRY AND JOINERY				
	MPENDULO PUBLIC P SCHOOL				
	PROVISIONAL BILLS OF QUANTITIES				

1	44mm Thick, framed door, in two equal leaves, formed of 44 x 105mm stiles, top rail and midrail, and double 105mm bottom rail, size 813 x 2,032mm high.	No	1		
2	44mm Thick, framed double door, in two equal leaves, with rebated meeting edges, formed of 44 x 105mm stiles, top rail and midrail, and double 105mm bottom rail, size 1612 x 2,032mm high.	No	2		
<u>FRAMED FRAMES ETC</u>					
<u>Wrought meranti:</u>					
3	70 x 90mm Rebated and angle rounded door frames plugged.	m	51		
<u>BEADS, ARCHITRAVES, ETC</u>					
<u>Wrought meranti:</u>					
4	19mm Quadrant bead planted on.	m	54		
5	19 x 70mm Architrave fixed.	m	20		
6	19 x 70mm Skirting fixed to walls including 19mm quadrant bead planted on.	m	147		
<u>Sundries:</u>					
7	38 x 76 mm Chamfered and grooved weatherboard fixed in and including groove or rebate in underside of door.	m	1		
<u>SHELVING</u>					
<u>Wrought laminated softwood:</u>					
8	19mm Thick laminated wrot S A pine shelving with rounded edges on front side, screwed to brackets (elsewhere).	m2	13		
<u>PINNING BOARDS</u>					
				R	
<p style="text-align: right;">Carried to Collection</p> <p>Section No. 3 Bill No. 7 CARPENTRY AND JOINERY MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES</p>					

Bitumen impregnated fibre board:

- | | | | |
|---|---|----|----|
| 1 | 12mm Insulation board backing plugged and glued to wall including all square cutting and waste. | m2 | 19 |
|---|---|----|----|

Wrought meranti:

- | | | | |
|---|--|---|----|
| 2 | 22 x 44mm Rebated and chamfered surrounds plugged and screwed to wall at not exceeding 500mm centres, including screws, holes, plugs, etc. | m | 53 |
| 3 | 22 x 44mm Twice rebated and chamfered transomes plugged and screwed to wall at not exceeding 500mm centres, including screws, holes, plugs, etc. | m | 11 |

FITTINGS

The following cupboard fittings have been measured as complete units i.e. the components of the units have not been separately measured, and must be installed by a firm of specialists. 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.

NATURE OF FURNITURECovers furniture, cabinets, cupboards, kitchen cupboards, storage cupboards, pigeonhole cupboards, work tops, vanity tops, workstations, counters, etc.

GENERAL FURNITURE CONSTRUCTIONConstruction is based around modular component design, unless otherwise specified, utilizing component fittings, fastening, fitments and connectors for the purpose of prefabrication and ready for site assembly.

GENERAL CARCASS MATERIAL SPECIFICATIONUnless otherwise specified, carcass construction of furniture components to be BISONBORD particle board. Melamine surfaced to both faces (BISONLAM). Finish in minimum 2mm thickness PVC **IMPACT** edging.

Carried to Collection

R

Section No. 3

Bill No. 7

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

GENERAL DOOR MATERIAL SPECIFICATION Unless otherwise specified, door and drawer frontals to be from BISONBORD particle board. Surface in FORMICA (CPL) to described thickness to outer faces and FORMICA (CPL) line to inner faces.

GENERAL WORK TOP MATERIAL SPECIFICATION Unless otherwise specified, all work tops fitted to walls or fitted to cupboards and cabinets, to be from BISONBORD moisture resistant particle board with profiled edges. Surface in FORMICA (HPL) to upper faces with FORMICA (HPL) BROWN backer balancer to reversed faces. All work tops butting up against walls to be edged in FORMICA (HPL) and exposed edges finished in minimum 3mm PVC edging to required widths. All work tops against tiles to receive coved tile trims (GENES1S flexi-head PVC coat SFB061/01) butting up against work top and tile surfaces.

GENERAL SERVICE TOPS MATERIAL SPECIFICATION Unless otherwise specified, service tops forming part of workstations and counters to be from 32mm FORMICA post formed water resistant particle board (Lifeseal worktop). Colour to be AS PER ARCHITECT. Service tops fitted independently to walls generally fixed by means of mild steel cleats and support brackets with hot dipped galvanized finish. Support brackets to be fitted at centers not exceeding 800mm.

GENERAL VANITY TOP MATERIAL SPECIFICATION Unless otherwise specified, vanity tops to be from 32mm FORMICA post formed water resistant particle board, incorporating splash backs, down stands, post-formed edges and cut-outs for basin (specified elsewhere) (Lifeseal worktop). Colour to be AS PER ARCHITECT. Vanity tops fitted independently to walls generally fixed by means of mild steel cleats and support brackets with hot dipped galvanized finish. Support brackets to be fitted at centers not exceeding 800mm.

FURNITURE HARDWARE AND IRONMONGERY Furniture hardware and ironmongery are described in terms of brand, fabricator type, followed by reference numbers and codes (all factory applied).

Carried to Collection

R

Section No. 3

Bill No. 7

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

SKIRTING FINISH TO FLOORS

Cupboard with skirting finish to front and side of components. To be installed to prevent water seepage.
Cupboard base structure front panel from 72 x 22mm
Meranti base with 19mm meranti quadrant, to be imbedded in a bed of silicone solution.

BOARD SURFACING

BISONBORD particle board (as described) is to be factory surfaced in surface finishes as described in accordance with board manufacturers specifications.

APPLIED EDGING

All 2mm and 3mm rigid PVC edging (as described) are to be factory applied by means of automated edge banding machinery. Finish in minimum 2mm thickness PVC **IMPACT** edging.

MILD STEEL SUPPORT BRACKET

Support Bracket
Type S01 To design and shape as shown for minimum 40mm x 5mm flat bar with 10mm square bar brace mild steel, welded to flat bar, pre-drilled and countersunk holed for wall fixings, work top and counter front fixings, hot dipped galvanized finish.

FURNITURE COLOUR SPECIFICATION

Unless otherwise specified, colour and finish specification to be as follows:

BISONLAM Double decor-colour:

AS PER ARCHITECT, finish: FORMICA

HPL-HG/S type

HPL-HG/P type

CPL-VG/P type

COLOUR WHITE (code 234), finish: Low Glar
Colour and finish specification to FORMICA (HPL-HG/S type and HPL-HG/P type).

Counters front panels and partitions to counters, forming dividers to be from FORMICA (fashion price range).
Colour to be AS PER ARCHITECT.

Carried to Collection

R

Section No. 3

Bill No. 7

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

FLOOR CUPBOARD IN-FILL PANELS

Unless otherwise specified ,in-fill panels to be applied on one or two ends for cupboards in length where wall dimensions are greater than cupboard. In-fill panels to be from BISONBORD 16mm thick. Surface on outer face in FORMICA (CPL) 0,6mm thick, with FORMICA (CPL) WHITE cabinet liner to reversed face. Fixing method: Secretly Fixed).

DIMENSIONSAll dimensions of joinery work to be checked on site and shop drawings to be presented to Architect for approval prior to any manufacturing of joinery work.

SAMPLE FURNITUREThe Architect may call on sample furniture in order to evaluate quality and construction methods of joinery work

IRONMONGERY Unless otherwise specified on Architects drawing detail, hardware and ironmongery to be as specified or similar approved

BLUM TYPETo be boss type hinges top open 110E for side panel mounting, including trim cups (maximum 780mm o/c).**BLUM TYPE**Reference: 71m158 - 110E - clip-on hingesReference: 174/E/60 - mounting plate

DRAWER RUNNERTo be full metal side and rear - full retractable with 16mm BISONLAM (colour: WHITE) drawer bases.**METABOX**Full extension (WHITE)Reference: Sides 500mm deep x 150mm high (352) 555.79.750Reference: Rear 150mm high 565.75.745

DOOR LOCKS (All doors and drawers to be lockable - keyed alike per room with Master Key - to Architects approval)To be from SYMO 3000 LOCKING SYSTEM, short bolt travel left or right (finish: Nickel Plates).**SHORT BOLT** Reference:

232.26.610 (Left)

232.26.600 (Right) Or**LONG BOLT**

Reference: 232.25.610 (Left)

232.25.600

(Right)**CYLINDER ROSE** Reference:
219.19.660

Carried to Collection

R

Section No. 3

Bill No. 7

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

PIGEON HOLE DOOR LOCKS

Pigeon hole special locks to be suitable for use of padlocks.

HAFELE TYPE

Level lock, zinc alloy, polished chrome, with left or right hand locking travel.

Reference: A - right 235.61.200
B - left 235.61.201

DRAWER LOCKS (Linked to Master Key System) Drawers to be locked in series of four in height, with face fitted SYMO 3000 LOCKING SYSTEM, for recessing in the cabinet side panel.

CENTRAL ROTARY LOCK NICKEL PLATES

Reference: 234.98.650

ROSETTE NICKEL PLATES

Reference: 219.19.660

BAR GUIDE

Reference: 237.23.006

ARRESTING PINES (for Metabox system)

Reference: 237.22.125

(12,5mm)

237.22.100 (18,0mm)

CENTRAL LOCKING BAR (800mm long)

Reference: 237.10.004

CARCASS CONNECTORS For factory machined ready to assemble purpose. BLUM TYPE Knock down

Reference: 42/070

SHELF SUPPORTS For factory machined ready to assemble purposes. BLUM TYPE Nylon Housing

Reference: 40.4001 Nylon

Cover Cap Reference: 41.5400

Finishing Screw Reference: 636.1050

Nylon Bush Reference:

41.1100

CUPBOARD DOOR CATCHERS**BUCHELE TYPE**

Elbow catch (Rooster) Reference: B1566

DOOR STOPS**HAFELE TYPE**

Press fit WHITE Reference: 356.20.725

Carried to Collection

Section No. 3

Bill No. 7

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

R

WORK TOP CONNECTORSHAFELE TYPE
 Suitable for 32mm built-up FORMICA
 topsMinimum three per 45E full jointReference:
 262.96.211Use in conjunction with LAMELLO
 joint pieces

BROOMSTICK HOLDERS
 For four holders per broom cupboard.
 HAFELE TYPE Reference: 520.10.009

Typical dividing partitions to design between typical
 counter units are similar in design to counter front
 panels.

HANDLES (To all doors and drawers)
 Reference: 96mm SIH 212 (SATIN FINISH)
 (Handles Inc. 021 422 2322)

**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:**

- | | | | |
|---|---|----|---|
| 1 | Classroom cupboard unit, size 7,470 x 450 x 720mm
high, including all finishes. | No | 2 |
| 2 | Kitchen cupboard 'L' shaped unit, size 3,310 x 1,800 x
600mm wide x 900mm high, including recess for stove
(stove not included) including all finishes. | No | 1 |

Carried to Collection

R

Section No. 3
 Bill No. 7
 CARPENTRY AND JOINERY
MPENDULO PUBLIC P SCHOOL
PROVISIONAL BILLS OF QUANTITIES

Section No. 3

Bill No. 7

CARPENTRY AND JOINERY

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

135

136

137

138

139

140

141

142

143

144

145

146

147

Carried Forward to Summary of Section No. 3**R**

Section No. 3

Bill No. 7

CARPENTRY AND JOINERY

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

	<u>Trap doors</u>				
1	Extra over Fibre-cement ceiling for forming trap door size 630 x 630mm in clear formed with 38 x 50mm sawn S.A. pine framing covered with ceiling boarding and set in 38 x 76mm wrought S.A. pine rebated kerb, including trimmers.	No	2		
	<u>Cornices</u>				
	<u>Paper covered gypsum cornice with skimmed joints plugged to walls including mitres, etc.:</u>				
2	75mm Coved cornice.	m	135		
	<u>Non-combustible polyester thermal insulation of a density of not less than 10kg/m3:</u>				
3	100mm Insulation in blanket form closely fitted and laid on top of branderling between roof timbers etc.	m2	195		
Carried to Collection					R
Section No. 3					
Bill No. 8					
CEILINGS, PARTITIONS AND ACCESS FLOORING					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

Section No. 3

Bill No. 8

CEILINGS, PARTITIONS AND ACCESS FLOORING

COLLECTION

Total Brought Forward from Page No.

**Page
No**

149

150

Amount**Carried Forward to Summary of Section No. 3**

R

Section No. 3

Bill No. 8

CEILINGS, PARTITIONS AND ACCESS FLOORING

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Supply and fix 300 x 300 x 2,5mm semi-flexible reinforced vinyl floor tiles, manufactured in accordance with SANS specification 581-1992, laid in approved acrylic emulsion adhesive, spread with a trowel having 1.5mm x 1.5mm triangular notches at 4.0mm centres at the rate of between 5.5m² & 6.5m² per litre, on a previously prepared sub-floor by builders as described above (clean, dry, smooth, level) and elsewhere measured including all cutting and waste.

1	On smooth screeded floors.	m2	164
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POLISH, SEALERS, ETC

Clean by stripping and sealing and apply three coats water based copolymer emulsion or other approved sealer:

2	On vinyl flooring.	m2	164
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Carried to Collection

R

Section No. 3

Bill No. 9

FLOOR COVERINGS, WALL LININGS, ETC.

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 3

Bill No. 9

FLOOR COVERINGS, WALL LININGS, ETC.

COLLECTION

Total Brought Forward from Page No.

**Page
No**

152

153

Amount**Carried Forward to Summary of Section No. 3****R**

Section No. 3

Bill No. 9

FLOOR COVERINGS, WALL LININGS, ETC.

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No	Quantity	Rate	Amount
<u>BILL No. 8</u>			
<u>IRONMONGERY</u>			
<u>Note:</u>			
For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary products in descriptions:</u>			
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:			
<u>Finishes to ironmongery:</u>			
Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list:			
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			
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.			
Carried to Collection			R
Section No. 3			
Bill No. 10			
IRONMONGERY			
MPENDULO PUBLIC P SCHOOL			
PROVISIONAL BILLS OF QUANTITIES			

Keys/Locks

Each lock is to be distinctly numbered with consecutive numbers and each key is to be stamped with the corresponding number to the lock that it controls. All locks are to have two keys

Trade Names

Where trade names are specified other ironmongery approved by the Principal Agent may be used

Fixing

Fixing of ironmongery is deemed to be fixed to timber unless otherwise described

Carried to Collection

R

Section No. 3

Bill No. 10

IRONMONGERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Hinges:

1	75 x 41mm Double washered solid brass butt hinges.	No	12
2	100 x 75mm Stainless steel hinges (Union 8352-100SS).	No	12
3	102 x 75mm Stainless steel hinges ball bearing hinges (Dorma-DBB-SS-008).	No	15

Locks:

4	Half cylinder mechanism (Union 2X8SCMKD).	No	2
5	Oval cylinder lockcase (Union L-2241-78SS).	No	2
6	Oval cylinder mortice lock with 57mm backset (Union L-2241-7B).	No	3
7	Profile cylinder deadlock (Union L-21315-76SS).	No	1
8	Profile cylinder deadlock (Union L-21314-76SS).	No	1
9	Oval knob cylinder 55mm (Union 2x13SC).	No	1
10	Oval double cylinder 65mm (Union 2x6SC).	No	2
11	Profile half cylinder (Union 2X20SCMKD).	No	1
12	Padlock with three keys (Union 3142).	No	4
13	Rebate conversion set (Union CB2979SC).	No	2

Handles:

14	Approved lever furniture (Union CB-612/06-13SC).	No	2
15	Lever furniture Protea on a 165 x 50mm backplate for oval cylinders (Solid-CB612-13).	No	6
16	Thru fix aluminium pull handle (Union AL5515-150BTAS).	No	1
17	Back to back 300mm fix aluminium pull handles (Union AL5515-300BBAS).	No	1

Carried to Collection**R**

Section No. 3

Bill No. 10

IRONMONGERY

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Door closers:

- | | | | |
|---|---|----|---|
| 1 | Size 2-4 Overhead door closer with regular arm (Union 7772). | No | 1 |
| 2 | Delayed action EN2-6 overhead door closer (Union 7836) including parallel arm bracket (Union PA-E010101). | No | 1 |

Push plates:

- | | | | |
|---|--|----|---|
| 3 | 150 x 345mm Stainless steel 1.2mm thick push/kick plate fixed to door with number 6 small raised head stainless steel screws at equal centres. | No | 2 |
| 4 | 925 x 144mm Girth stainless steel 1.2mm thick push/kick plate, twice bent along length to fit over top of door, fixed to door with number 8 small raised head stainless steel screws at equal centres. | No | 6 |

Sundries:

- | | | | |
|---|---|----|---|
| 5 | Flush bolt (Dorma DFB-SS-027/160mm). | No | 4 |
| 6 | Floor mounted floor holder (Halstead 401-SC). | No | 5 |

BATHROOM FITTINGS ETC.**Stainless steel 32mm diameter grab rails grade 304 stainless steel:**

- | | | | |
|---|---|----|---|
| 7 | Franke CNTX750, size 750 x 90mm deep grab rails plugged and screwed to wall. | No | 1 |
| 8 | Franke CNTX41R, size 127 x 127 x 500mm deep right side rails plugged and screwed to wall. | No | 1 |
| 9 | Franke CNTX21, size 415 x 415 x 95mm deep grab rail plugged and screwed to wall. | No | 1 |

Toilet paper dispensers:

- | | | | |
|----|--|----|---|
| 10 | Standard approved lockable toilet paper dispenser, colour white, holding 3 rolls (Type SE3). | No | 7 |
|----|--|----|---|

Carried to Collection

R

Section No. 3

Bill No. 10

IRONMONGERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Towel rails:

- | | | | |
|---|---|----|---|
| 1 | 19mm Diameter stainless steel chromium plated towel rail 900mm long including end brackets plugged to wall. | No | 2 |
|---|---|----|---|

Catches and escutcheons:

- | | | | |
|---|--|----|---|
| 2 | Escutcheon stainless steel - profile cutout (Union SS5305-05SS). | No | 1 |
| 3 | Escutcheon privacy for physically disabled (Union 5004-73SS). | No | 1 |
| 4 | Adjustable roller catch (Erebus E1511). | No | 6 |

Cabin hooks:

- | | | | |
|---|---|----|---|
| 5 | 150mm Brass cabin hook and eye fixed, including 70 x 70 x 20mm chamfered hardwood block twice oiled and four times plugged to wall. | No | 2 |
|---|---|----|---|

Longarms:

- | | | | |
|---|---|----|---|
| 6 | 32mm Diameter polished hardwood longarm 1.2m long fitted with polished brass pole hook, secured in one chromium plated spring clip screwed to and including small polished hardwood block plugged to wall and fitted on hardwood base size 88 x 88mm countersunk for rod plugged to floor, including quadrant planted on. | No | 2 |
|---|---|----|---|

Sundries:

- | | | | |
|---|---|----|---|
| 7 | 32mm Diameter black rubber door stop plugged to concrete floor. | No | 3 |
| 8 | Doorstop and holder (Halcast 401SC). | No | 1 |
| 9 | 50mm Plastic key tag. | No | 9 |

LETTERS, NAMEPLATES, ETC.**Acrylic door plates:**

- | | | | |
|----|--|----|---|
| 10 | 40 x 40 x 5mm Thick black acrylic door number plate with two numbers size 25mm high, engraved with arial font and painted white, fixed to door, door frame or wall with chromium plated domeheaded screws. | No | 7 |
|----|--|----|---|

Carried to Collection

R

Section No. 3

Bill No. 10

IRONMONGERY

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

1	250 x 40 x 6mm Thick white acrylic door name plate with nine letters size 30mm high, engraved with arial font and painted navy, fixed to door, door frame or wall with double sided adhesive tape (Provisional).	No	1		
	<u>Sign plates:</u>				
2	152 x 152 x 2mm Anodised silver engraved sign with Fire Extinguisher Pictogram E06, fixed to wall or door (Union AL5066E-06/2AS).	No	4		
3	152 x 152 x 2mm Anodised silver engraved sign with Directional Pictogram E08, fixed to wall or door (Union AL5066E-08/2AS).	No	4		
4	152 x 152 x 2mm Anodised silver engraved sign with Male/Female Pictogram E10/E11, fixed to wall or door (Union AL5066E-10/11/2AS).	No	1		
5	152 x 152 x 2mm Anodised silver engraved sign with Female Pictogram E11, fixed to wall or door (Union AL5066E-11/2AS).	No	1		
6	152 x 152 x 2mm Anodised silver engraved sign with Male and Female Pictogram E12, fixed to wall or door (Union AL5066E-12/2AS).	No	1		
7	152 x 152 x 2mm Anodised silver engraved sign with Paraplegic Pictogram E14, fixed to wall or door (Union AL5066E-14/2AS).	No	1		
8	152 x 152 x 2mm Anodised silver engraved sign with Fire Escape Pictogram E15, fixed to wall or door (Union AL5066E-15/2AS).	No	1		
9	152 x 152 x 2mm Anodised silver engraved sign with Fire Escape Pictogram E16, fixed to wall or door (Union AL5066E-16/2AS).	No	1		
Carried to Collection					R
Section No. 3					
Bill No. 10					
IRONMONGERY					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

Section No. 3

Bill No. 10

IRONMONGERY

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

155

156

157

158

159

160

Carried Forward to Summary of Section No. 3**R**

Section No. 3

Bill No. 10

IRONMONGERY

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No		Quantity	Rate	Amount
	<p><u>BILL No. 9</u></p> <p><u>METALWORK</u></p> <p><u>Note:</u></p> <p>For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>The Contractor is to check and verify on site that the item specified in the BoQ matches existing prior to placing orders. Additional costs will not be borne by the client for items that do not match existing and are not approved by the Principal Agent</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 Hot dipped galvanised unless otherwise stated.</p> <p><u>SUNDRY BRASS WORK:</u></p> <p><u>Brass:</u></p>			
1	<p>4 x 30mm Weatherbar set in concrete flush with floor finish one side.</p> <p><u>GALVANIZED STEEL WINDOW FRAMES</u></p>	m	5	
	<p style="text-align: right;">Carried to Collection</p> <p>Section No. 3 Bill No. 11 METALWORK MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES</p>		R	

'FX7' Industrial type window frames fitted with burglar bars to all opening sections at factory:

1	Window type SS33 (W1), size 987 x 1445mm high with MBP2 burglar bars.	No	6
2	Window type SS33 & SSF31 COMPOSITE (W2), size 987 x 1445mm high & 987 X 511mm high, with MBP2 burglar bars.	No	8
3	Window type SS22 (W6), size 673 x 978mm high with MBP2 burglar bars.	No	1
4	Window type SS42 (W7), size 1,302 x 978mm high with MBP2 burglar bars.	No	2
5	Window type NCT1S (W5), size 533 x 949mm high with burglar bars.	No	7

ALUMINIUM WINDOWS

All windows to be approved by the Architect prior to installation.

Natural anodized aluminium windows, factory glazed with 6.38mm laminated safety glass with clip-on glazing beads, with neoprene seals and fixed with minimum three lugs per side in accordance with manufacturers instructions:

6	Purpose made fixed window, type 'W3', size 2400 x 1200mm, in four sections complete.	No	2
7	Purpose made fixed window, type 'W4', size 1480 x 1200mm, in two sections complete.	No	1

ROLLER SHUTTER DOORS

Steel roller shutter doors:

Carried to Collection

R

Section No. 3

Bill No. 11

METALWORK

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Note: The contractor is to check on site measurements before placing of order.

- | | | | |
|---|--|----|---|
| 1 | Steel roller shutter galvanised and powder coated face fixed chain operated for opening not exceeding 1,000 x 1,200mm high, with overhead box 285mm high, with 0,6mm thick slats, 75mm wide side guides and two barrel bolts including extruded aluminium T-bar with rubber seal. | No | 1 |
| 2 | Steel roller shutter galvanised and powder coated face fixed chain operated for opening not exceeding 5,880 x 2,610mm high, with overhead box, with 0.8mm thick slats, 75mm wide side guides and two barrel bolts including extruded aluminium T-bar formed of 40 x 40mm angle iron, with rubber seal. | No | 1 |

GALVANIZED GATES

Hot Dipped Galvanised Steel Gates:

Note: The contractor is to check on site measurements before placing of order.

- | | | | |
|---|--|----|---|
| 3 | Double yard gate size 1,475 x 2100mm high formed of 32 x 32 x 1.6mm hollow square section framing to detail, with VEM 6320 H "Valmetex" expanded metal mesh welded to inside frame, with 12mm solid rods welded horizontally, with stainless steel shackle for locking mechanism, with 38 x 38 x 10mm thick plates as hinges with rounded ends to one side and hole for 18mm diameter pin hung on pair of socketted and pinned hinges with pin 18mm in diameter and bolted to brick wall, with 200mm locking bolt welded on, or other approved hinges. | No | 2 |
| 4 | Entrance double gate size 2,130 x 2,125mm high formed of 32 x 32 x 1.6mm hollow square section framing to detail, with VEM 6320 H "Valmetex" expanded metal mesh welded to inside frame, with 10 x 30mm flat bar shaped to detail and 12mm solid rods welded horizontally, with stainless steel shackle for locking mechanism, with 38 x 38 x 10mm thick plates as hinges with rounded ends to one side and hole for 18mm diameter pin hung on pair of socketted and pinned hinges with pin 18 mm in diameter and bolted to brick wall, with 200mm locking bolt welded on, or other approved hinges. | No | 2 |

Carried to Collection

R

Section No. 3

Bill No. 11

METALWORK

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

1	Entrance single gate size 1,040 x 2,125mm high formed of 32 x 32 x 1.6mm hollow square section framing to detail, with VEM 6320 H "Valmetex" expanded metal mesh welded to inside frame, with 10 x 30mm flat bar shaped to detail and 12mm solid rods welded horizontally, with stainless steel shackle for locking mechanism, with 38 x 38 x 10mm thick plates as hinges with rounded ends to one side and hole for 18mm diameter pin hung on pair of socketted and pinned hinges with pin 18 mm in diameter and bolted to brick wall, with 200mm locking bolt welded on, or other approved hinges.	No	1
2	Entrance single gate size 1,040 x 2,125mm high formed of 32 x 32 x 1.6mm hollow square section framing to detail, with VEM 6320 H "Valmetex" expanded metal mesh welded to inside frame, with 10 x 30mm flat bar shaped to detail and 12mm solid rods welded horizontally, with stainless steel shackle for locking mechanism, with 38 x 38 x 10mm thick plates as hinges with rounded ends to one side and hole for 18mm diameter pin hung on pair of socketted and pinned hinges with pin 18 mm in diameter and bolted to brick wall, with 200mm locking bolt welded on, or other approved hinges.	No	1
3	Entrance single gate size 1,180 x 2,355mm high formed of 32 x 32 x 1.6mm hollow square section framing to detail, with VEM 6320 H "Valmetex" expanded metal mesh welded to inside frame, with 10 x 30mm flat bar shaped to detail and 12mm solid rods welded horizontally, with stainless steel shackle for locking mechanism, with 38 x 38 x 10mm thick plates as hinges with rounded ends to one side and hole for 18mm diameter pin hung on pair of socketted and pinned hinges with pin 18 mm in diameter and bolted to brick wall, with 200mm locking bolt welded on, or other approved hinges.	No	1

SUNDRY GALVANISED STEELWORK**Carried to Collection****R**

Section No. 3

Bill No. 11

METALWORK

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Purpose made towel rails:

- | | | | |
|---|--|----|---|
| 1 | Purpose made towel rail 2500mm long consisting of 32 x 3mm mild steel bar with 4mm thick mild steel bent towel hooks welded on 3mm from bottom, spaced 60mm apart, projecting 12mm from the flat bar face and end 12mm from the top of the bar for forty towels, securely fixed to wall. | No | 2 |
|---|--|----|---|

Purpose made roof supports, columns etc.

- | | | | |
|---|---|----|----|
| 2 | 75mm Outside diameter x 6.51kg/m tubular column 3,085mm long with 150 x 150 x 10mm base plate welded on to bottom end and top end having 150 x 3mm thick x 375mm girth channel-shaped bracket eight times holed for bolts (elsewhere measured) welded on including setting up in position and embedding bottom end in concrete. | No | 11 |
| 3 | 75 x 3mm Thick three times bent T-shaped roof truss bracket 375mm girth, three times holed for bolts (Bolts and holes elsewhere measured). | No | 37 |

Sundries:

- | | | | |
|---|--------|----|----|
| 4 | Bolts. | kg | 11 |
|---|--------|----|----|

SHELVING**Approved standard epoxy powder coated finish shelving, etc. fixed in position strictly in accordance with the manufacturer's specification:**

- | | | | |
|---|--|----|----|
| 5 | 1600mm High double slot wall band fixed to wall with 8 x 80mm 'Hilti' drive anchors. | No | 9 |
| 6 | 350mm Wide shelf bracket. | No | 54 |

STEEL LOCKERS

Carried to Collection

R

Section No. 3

Bill No. 11

METALWORK

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Approved standard epoxy powder coated finish lockers, etc. fixed in position strictly in accordance with the manufacturer's specification:

- 1 Steel double door stationary cupboard fitted complete with security bar, including 3 shelves, code 'CU50' and 6 times holed for and including fixing to wall with 70 x 10mm diameter expansion anchor and bolt, colour: cream.

No

2

Carried to Collection

R

Section No. 3

Bill No. 11

METALWORK

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 3

Bill No. 11

METALWORK

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

162

163

164

165

166

167

Carried Forward to Summary of Section No. 3**R**

Section No. 3

Bill No. 11

METALWORK

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No		Quantity	Rate	Amount
	<u>BILL No. 10</u>			
	<u>PLASTERING</u>			
	<u>Note:</u>			
	For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Proprietary products in descriptions:</u>			
	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.			
	<u>SCREEDS</u>			
	<u>3:1 Cement plaster screeds steel trowelled on concrete:</u>			
1	25mm thick on floors.	m2	195	
2	In narrow widths.	m2	0.3	
	<u>Prepare and clean surface and apply thin bed of single component protein free, quick hardening cement based screed, in strict accordance with manufacturer's instructions, to form an even surface to receive vinyl tiles (elsewhere measured):</u>			
3	On new screeded floors (Provisional).	m2	161	
	<u>GRANOLITHIC</u>			
	<u>Untinted granolithic on concrete:</u>			
4	20mm Thick on treads and risers of door thresholds including readings.	m2	2	
	Carried to Collection			
	Section No. 3			
	Bill No. 12			
	PLASTERING			
	MPENDULO PUBLIC P SCHOOL			
	PROVISIONAL BILLS OF QUANTITIES			

R

INTERNAL PLASTER**Cement plaster on brickwork:**

1	On walls.	m2	357
2	In narrow widths.	m2	20

Carried to Collection**R**

Section No. 3

Bill No. 12

PLASTERING

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Section No. 3

Bill No. 12

PLASTERING

COLLECTION

Total Brought Forward from Page No.

**Page
No**

169

170

Amount**Carried Forward to Summary of Section No. 3****R**

Section No. 3

Bill No. 12

PLASTERING

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No		Quantity	Rate	Amount
	<u>BILL No. 11</u>			
	<u>TILING</u>			
	<u>Note:</u>			
	For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Proprietary products in descriptions:</u>			
	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.			
	<u>Fixing:</u>			
	Tiling shall be fixed with an approved tile adhesive to a plaster backing. Plaster backing is measured elsewhere.			
	<u>INTERNAL WALL TILING</u>			
	<u>WALL TILING</u>			
	<u>Grade 1 white glazed ceramic tiles size 200 x 200mm sealed to plastered surfaces with 4mm wide joints and grouted in white grout with fungicidal solution additive :</u>			
1	On smooth plastered walls.	m2	107	
2	Ditto, on narrow widths.	m2	9	
	<u>Sundries:</u>			
3	PVC external corner strip piece, fixed in accordance with manufacturer's instructions (Provisional).	m	56	
	Carried to Collection			
	Section No. 3			
	Bill No. 13			
	TILING			
	MPENDULO PUBLIC P SCHOOL			
	PROVISIONAL BILLS OF QUANTITIES			

R

- 1 PVC external round trim piece 10.5mm high, fixed in accordance with manufacturer's instructions (Provisional).

m

82

Carried to Collection

R

Section No. 3

Bill No. 13

TILING

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 3

Bill No. 13

TILING

COLLECTION

Total Brought Forward from Page No.

**Page
No**

172

173

Amount**Carried Forward to Summary of Section No. 3**

R

Section No. 3

Bill No. 13

TILING

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Rate

Amount

Chasing:

Chasing pipes into new walls shall be regarded as "building in" and is not measured separately. The cost of chasing, wrapping in suitable bown paper and making good shall be included in the rates for pipes.

Holes for pipes through new walls:

No allowance for holes and drilling for pipes through new walls has been made in these bills of quantities, the price for all holes and making good shall be deemed to be included in the description of pipes.

Reducing fittings:

Where fittings have reducing ends or branches they are described as 'reducing'. In the case of pipes with diameters not exceeding 60mm only the largest end or branch 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 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained.

Description of pipes laid in trenches:

Descriptions of pipes laid in trenches shall be deemed to include for carting away all surplus excavated material to a dumping site located by the contractor.

Excavations:

No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.

'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.

Laying, backfilling, bedding, etc of pipes:

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

Carried to Collection

R

Section No. 3

Bill No. 14

PLUMBING AND DRAINAGE

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB: Earthworks (Pipe trenches) Clause 5.7.2 will only be applicable if authorised by the Engineer in writing.

Flush pans:

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

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

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

Fixing:

Descriptions of wall mounted, floor standing, drop-in, etc type sanitary fittings shall be deemed to include fixing in position and all fixing accessories.

Descriptions of proprietary items shall include fixing in position and all fixing accessories as specified by the manufacturer.

Waste unions:

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

Sleeve pipes:

Electrical sleeve pipes to be Class 34 and are to include for draw wires.

RAINWATER DISPOSAL (PROVISIONAL):

Watertite or equal approved Aluminium Gutters and Downpipes:

1	150 x 125 x 150mm High eaves gutter fixed to falls in continuous lengths at not exceeding 600mm centres with and including approved gutter brackets.	m	103
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Carried to Collection

R

Section No. 3

Bill No. 14

PLUMBING AND DRAINAGE

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

1	Extra over eaves gutter for corner.	No	10
2	Extra over eaves gutter for outlet for 100 x 75mm pipe.	No	6
3	100 x 75mm Rainwater pipes fixed to walls with and including approved holderbats at 900mm centres.	m	24
4	Extra over rainwater pipe for bend.	No	28
5	Extra over rainwater pipe for shoe.	No	6

SOIL DRAINAGE

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

uPVC Soil pipes (SABS 791-1986):

6	110mm Pipes vertically or ramped to cleaning eyes etc in and including trenches not exceeding 1000mm deep.	m	16
7	110mm Pipes laid in ground not exceeding 1000mm deep including all excavations in earth, bedding cradle and blanket fill of selected granular material, main fill compacting in layers not exceeding 150mm thick, adjust moisture content to optimum and compact to a density of 90% Modified AASHTO in drain trenches including carting off surplus displaced material.	m	42
8	160mm Pipes (Class 34) laid in ground not exceeding 1000mm deep including all excavations in earth, bedding cradle and blanket fill of selected granular material, main fill compacting in layers not exceeding 150mm thick, adjust moisture content to optimum and compact to a density of 90% Modified AASHTO in drain trenches including carting off surplus displaced material.	m	20

Extra over uPVC pipes for fittings:

9	110mm Bend.	No	7
10	160mm Bend.	No	1
11	110mm Access bend.	No	7

Carried to Collection**R**

Section No. 3

Bill No. 14

PLUMBING AND DRAINAGE

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Class 10 hdpe piping (Provisional):

1	22mm Water piping laid in ground or ground filling including excavating with not less than 900mm cover including bedding cradle and blanket fill of selected granular material, main fill compacting in layers not exceeding 150mm thick, adjust moisture content to optimum and compact to a density of 90% Modified AASHTO in trenches including carting off surplus displaced material.	m	25
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Extra on piping for the following Class 10 fittings:

2	22mm Fittings.	No	5
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Sundries:

3	300 x 200 x 200mm High precast concrete stopcock box including precast concrete lid, all excavations, etc.	No	1
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SANITARY FITTINGS**Vitreous china:**

4	Vaal Sanitaryware 510 x 405mm Hibiscus White vitreous china lavatory basin (product code 7023) with two tap holes including integrated overflow and chain stay hole, bolted to wall with two 10mm bolts (product code 8448Z0).	No	5
5	Vaal Sanitaryware Hibiscus White vitreous china close coupled wash down suite comprising 90° outlet open rim pan (product code 772600) and matching 6/3 litre top dual flush cistern (product code 710741) including lid and fitments, and heavy duty double flap seat.	No	6
6	Protea Paraplegic white vitreous china floor mounted paraplegic washdown suite (product code 750246) comprising 90° outlet pan (product code 750200) with double flap HD seat and matching 9 litre cistern (product code 710631) including lid, fitments, etc with purpose made chromium plated side mounted flush lever (left or right), bedded in 4:1 cement mortar on concrete floors.	No	1

Carried to Collection**R**

Section No. 3

Bill No. 14

PLUMBING AND DRAINAGE

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

'Franke (t/a Citimetal)' grade 304 (18/10) stainless steel catering ware:

1	Franke Kitchen Systems (t/a Citimetal) grade 304 (18/10) stainless steel model centre inset sink size 1200 x 500mm (Code 821017) with two 410 x 343 x 187mm diameter deep bowls, with two 38mm PVC waste and plug with handle (302021), set on cupboard fittings (by others) including cutting two tap holes.	No	1
2	Franke Kitchen Systems (t/a Citimetal) grade 304 (18/10) stainless steel model LDL002 wash trough size 1200 x 535 x 260mm deep with two pressed bowls with 50mm outlets, with two 25mm square stainless steel gallow brackets fixed to wall with 6mm stainless steel anchor bolts, with front legs and adjustable foot piece.	No	2

WASTE UNIONS ETC**Waste unions etc:**

3	32mm Code 301 chrome plated basin waste union.	No	5
4	40mm Code 316 chrome plated unslopped bath or sink waste union.	No	5

TRAPS ETC**Traps etc:**

5	32mm Cobra Watertech chrome plated deep seal bottle trap with outlet for 50mm PVC (Code 345/50).	No	5
6	40mm Chrome plated deep seal bottle trap with outlet for 50mm PVC (code 365/50).	No	1
7	40 x 300mm Sink combination for double bowl with deepseal "P" trap.	No	2

TAPS, VALVES, ETC**Brushed finish brass steel:**

8	15mm Bibcock with hose union.	No	1
9	15mm Stopcock.	No	2

Carried to Collection**R**

Section No. 3

Bill No. 14

PLUMBING AND DRAINAGE

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

1	15mm Draincock.	No	7
	<u>Disc medical fittings:</u>		
2	15mm Chrome plated elbow action pillartap (code 503-21B).	No	1
	<u>Pillar taps:</u>		
3	15mm Chrome plated code 211-15 pillar tap.	No	4
4	15mm Chrome plated code 112-15 pillar tap with raised nose hose.	No	2
5	15mm Watertech pillar tap aerator outlet and flanged backnut (code114CA-15).	No	4
	<u>Sundries, etc:</u>		
6	Standard 15mm stainless steel braided female swivel connection piece 350mm long.	No	18
7	15mm Short arm angle regulating ball stop.	No	7
	<u>SANITARY PLUMBING</u>		
	<u>uPVC piping (SABS 967-1987):</u>		
8	40mm Waste piping fixed to walls.	m	40
9	50mm Ditto.	m	12
10	110mm Ditto.	m	24
	<u>Extra over uPVC piping for:</u>		
11	40mm Bend.	No	8
12	50mm Bend.	No	4
13	110mm Bend.	No	7
14	40mm Access bend.	No	16
15	50mm Access bend.	No	4
Carried to Collection			
Section No. 3 Bill No. 14 PLUMBING AND DRAINAGE MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES			

Carried to Collection

R

Section No. 3
Bill No. 14
PLUMBING AND DRAINAGE
MPENDULO PUBLIC P SCHOOL
PROVISIONAL BILLS OF QUANTITIES

1	110mm Access bend.	No	7
2	110mm Access bend with anti-syphon horn.	No	7
3	40mm Junction.	No	16
4	50mm Junction.	No	4
5	110mm Junction.	No	7
6	40mm Access junction.	No	8
7	50mm Access junction.	No	4
8	110mm Access junction.	No	6
9	110mm Double reducing junction.	No	7
10	110mm Pan Collar.	No	7

Testing:

11	Testing waste water pipe system.	Item
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WATER SUPPLIES**Class 2 medium copper pipes:**

12	15mm Pipe building into walls.	m	74
13	22mm Ditto.	m	23

Extra over class 2 copper pipes for brass compression fittings:

14	15mm Fittings.	No	85
15	22mm Fittings.	No	39

Polypropylene pipes with thermoplastic couplings:

16	15mm Pipes fixed to walls.	m	12
17	22mm Ditto.	m	10
18	28mm Ditto.	m	8

Carried to Collection

R

Section No. 3
 Bill No. 14
 PLUMBING AND DRAINAGE
MPENDULO PUBLIC P SCHOOL
PROVISIONAL BILLS OF QUANTITIES

<u>Extra over polypropylene pipes for thermoplastic fittings:</u>					
1	15mm Fittings.	No	16		
2	22mm Fittings.	No	12		
3	28mm Fittings.	No	8		
<u>Testing:</u>					
4	Testing water supply pipe system.		Item		
<u>Sundry work in connection with all plumbing:</u>					
5	Form hole in 220mm brickwall not exceeding 100mm diameter including making good.	No	8		
<u>SLEEVES</u>					
<u>Plastic sleeves:</u>					
6	160mm uPVC pipe laid in and including trenches not exceeding 1m deep.	m	8		
<u>Extra on UPVC piping for:</u>					
7	160mm Diameter long radius bend.	No	2		
8	160mm End plug.	No	2		
<u>Sundries:</u>					
9	350 x 350 x 50mm Precast concrete marker slab, with letter or symbol, set in ground.	No	2		
<u>FIRE APPLIANCES ETC.</u>					
<u>Portable fire extinguishers:</u>					
10	9 Kg carbondioxide portable chemical fire extinguisher complete with full load, wall hook and bracket, bracket fixed to and including 25 mm Wrot Meranti backboard, size 250 x 500mm high with chamfered edges, varnish and fixed to wall.	No	3		
Carried to Collection				R	
Section No. 3					
Bill No. 14					
PLUMBING AND DRAINAGE					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

[illegible]

Section No. 3

Bill No. 14

PLUMBING AND DRAINAGE

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

175

176

177

178

179

180

181

182

183

184

185

Carried Forward to Summary of Section No. 3

R

Section No. 3

Bill No. 14

PLUMBING AND DRAINAGE

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

6mm Silvered float glass copper backed mirrors
with polished edges holed for and fixed with
chromium plated dome capped mirror screws with
rubber buffers to plugs in brickwork or concrete:

1	Mirror 450 x 600mm high including four CP screw caps.	No	5
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Carried to Collection

R

Section No. 3

Bill No. 15

GLAZING

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 3

Bill No. 15

GLAZING

COLLECTION

Total Brought Forward from Page No.

**Page
No**

187

188

Amount**Carried Forward to Summary of Section No. 3****R**

Section No. 3

Bill No. 15

GLAZING

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

<u>Prepare and apply one coat universal primer, one undercoat and two coats superior quality eggshell enamel:</u>					
1	On sills.	m2	7		
<u>ON PLASTERED SURFACES</u>					
<u>Prepare and apply one undercoat and paint with two coats premium quality pure acrylic PVA on:</u>					
2	Interior walls.	m2	293		
<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 (Externally).	m2	534		
<u>ON WOOD</u>					
<u>Prepare and apply one coat wood primer, one undercoat and two coats superior quality smooth gloss enamel on:</u>					
4	General surfaces of timbers at eaves.	m2	132		
<u>Prepare and apply one coat wood primer, one undercoat and two coats superior quality eggshell enamel on:</u>					
5	Doors (all surfaces measured).	m2	35		
6	On windows, sash doors and fanlights.	m2	20		
7	Frames, rails, etc not exceeding 300mm girth.	m	67		
<u>Prepare and apply one coat wood primer, one undercoat and two coats superior quality eggshell enamel on:</u>					
8	Skirtings, rails, etc not exceeding 300mm girth.	m	159		
Carried to Collection				R	
Section No. 3					
Bill No. 16					
PAINTWORK					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

<u>Prepare and apply three coats polyurethane matt varnish on:</u>					
1	General surfaces.	m2	18		
2	General surfaces of fittings.	m2	18		
<u>Two coats wood primer on:</u>					
3	Backs of frames, linings, etc not exceeding 300mm wide.	m	51		
<u>ON METAL</u>					
<u>Clean down thoroughly with galvanised iron cleaner, wash down with water, and apply one coat bituminous paint on:</u>					
4	Backs of steel window frames not exceeding 300mm girth.	m	110		
<u>Clean down thoroughly with galvanised iron cleaner, wash down with water, prime with one coat galvanised metal primer and finish with two coats superior universal non drip enamel on:</u>					
5	Exterior gates, grilles, burglar screens, balustrades, etc. (both sides measured over the full flat area).	m2	46		
<u>Clean down thoroughly with galvanised iron cleaner, wash down with water, prime with one coat metal primer and finish with two coats superior quality enamel on:</u>					
6	Windows with burglar bars (both sides measured).	m2	62		
Carried to Collection				R	
Section No. 3					
Bill No. 16					
PAINTWORK					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

Section No. 3

Bill No. 16

PAINTWORK

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

190

191

192

Carried Forward to Summary of Section No. 3

R

Section No. 3

Bill No. 16

PAINTWORK

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Filling supplied by the contractor to form platforms

- | | | | |
|---|--|----|-----|
| 1 | Over site of Selected Subgrade G5 material in accordance with SABS 1 200 DM in layers not exceeding 150mm thick and compacted to 95% Mod AASHTO density. | m3 | 250 |
|---|--|----|-----|

Compaction of surfaces

- | | | | |
|---|---|----|-----|
| 2 | 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 | 500 |
|---|---|----|-----|

Tests

- | | | | |
|---|--|----|------|
| 3 | Allow for Mod AASHTO density tests on filling. | No | 4.00 |
|---|--|----|------|

Carried to Collection**R**

Section No. 4
 Bill No. 1
 BULK EARTHWORKS
MPENDULO PUBLIC P SCHOOL
PROVISIONAL BILLS OF QUANTITIES

Section No. 4

Bill No. 1

BULK EARTHWORKS

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

195

196

Carried Forward to Summary of Section No. 4

R

Section No. 4

Bill No. 1

BULK EARTHWORKS

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

	<u>Risk of collapse of excavations:</u>				
1	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	84		
	<u>Keeping excavations free of water:</u>				
2	Keeping excavations free of water.		Item		
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density:</u>				
3	Backfilling to trenches, holes, etc.	m3	13		
	<u>Earth filling supplied by the contractor compacted to 95% Mod AASHTO density:</u>				
4	Under floors, steps, pavings, etc.	m3	6		
	<u>Compaction of surfaces:</u>				
5	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density.	m2	23		
	<u>15MPa/20mm concrete:</u>				
6	Strip footings.	m3	9		
	<u>25MPa/20mm concrete:</u>				
7	Surface beds.	m3	3		
	<u>Sundries:</u>				
8	Extra for setting in position and casting holding down bolt into concrete base.	No	16		
	<u>Finishing top surfaces of concrete smooth with a wood float:</u>				
9	Apron slabs, paving, etc to slight falls.	m2	32		
Carried to Collection				R	
Section No. 4					
Bill No. 2					
RAINWATER TANKS					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

<u>Rough Formwork to Sides:</u>					
1	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	46		
<u>Fabric reinforcement:</u>					
2	REF. 156 fabric reinforcement in concrete surface beds, slabs, etc.	m2	32		
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u>					
3	One brick walls.	m2	66		
<u>Brickwork reinforcement:</u>					
4	150mm Wide reinforcement built in horizontally.	m	102		
<u>Galvanised hoop iron cramps, ties, etc:</u>					
5	30 x 1,6mm Tie secured around tank and 4 times built into concrete (Total for one tank = 12 meters).	No	4		
<u>Facebricks (FBS) prime cost of R7 000.00 per thousand excluding VAT delivered to the site pointed with square ruled recessed horizontal and vertical joints:</u>					
6	Extra over brickwork for face brickwork externally.	m2	48		
7	Fair cutting at squint quoins or birdsmouth angles.	m	3		
<u>One layer of 250 micron 'USB GREEN' waterproof sheeting sealed at laps with 'Gunplas Pressure Sensitive Tape':</u>					
8	Under surface beds.	m2	32		
Carried to Collection				R	
Section No. 4					
Bill No. 2					
RAINWATER TANKS					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

Rainwater tanks:

- | | | | |
|---|---|----|---|
| 1 | 4500 Litre polyethylene rotomoulded vertical water storage tank complete with lid, fitted with and including 15mm brass bibtap (Type 108LK15) with suitable adaptor and setting in position on concrete tankstand (elsewhere measured) and tying down with 4mm diameter galvanised wire wrapped twice around centre of tank and secured to each corner of tank stand with a double strand of 4mm diameter galvanised wire embedded into concrete. (Note: tanks to be filled with water before Practical Completion). | No | 1 |
| 2 | 5500 Litre polyethylene rotomoulded horizontal water storage tank complete, size 2510 x 2120 x 1450mm with lid, fitted with and including 15mm brass bibtap (Type 108LK15) with suitable adaptor and setting in position on concrete tankstand (elsewhere measured) and tying down with 4mm diameter galvanised wire wrapped twice around centre of tank and secured to each corner of tank stand with a double strand of 4mm diameter galvanised wire embedded into concrete. (Note: tanks to be filled with water before Practical Completion). | No | 3 |
| 3 | Hole through top of tank lid for 100mm diameter pipe. | No | 4 |

Carried to Collection

R

Section No. 4

Bill No. 2

RAINWATER TANKS

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 4

Bill No. 2

RAINWATER TANKS

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

198

199

200

201

Carried Forward to Summary of Section No. 4

R

Section No. 4

Bill No. 2

RAINWATER TANKS

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No		Quantity	Rate	Amount
	<u>BILL No. 3</u>			
	<u>EXTERNAL WORK (PROVISIONAL)</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (1999 Edition), the Department of Public Works document No. OW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Proprietary products in descriptions:</u>			
	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.			
	<u>RAMPS AND STAIRS</u>			
	<u>Site clearance:</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m2	7	
	<u>Open face excavation not exceeding 2m deep:</u>			
2	Over site to reduce levels and depositing excavated material in prescribed stock piles on site.	m3	2	
	<u>Excavation in earth not exceeding 2m deep:</u>			
3	Trenches.	m3	7	
	<u>Extra over trench and hole excavations in earth for excavation in:</u>			
4	Soft rock.	m3	2	
5	Hard rock.	m3	2	
	Carried to Collection			
	Section No. 4			
	Bill No. 3			
	RAMPS AND STAIRS			
	MPENDULO PUBLIC P SCHOOL			
	PROVISIONAL BILLS OF QUANTITIES			

R

<u>Extra over all excavations for carting away:</u>					
1	Surplus material from stock piles on site to a dumping site to be located by the contractor.	m3	5		
<u>Risk of collapse of excavations:</u>					
2	Sides of trench and hole excavations not exceeding 1,5m deep.	m2	15		
<u>Keeping excavations free of water:</u>					
3	Keeping excavations free of water.		Item		
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density:</u>					
4	Backfilling to trenches, holes, etc.	m3	4		
<u>Earth filling supplied by the contractor compacted to 93% Mod AASHTO density:</u>					
5	Under floors, steps, pavings, etc.	m3	2		
<u>Compaction of surfaces.</u>					
6	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	6		
<u>15MPa/20mm concrete:</u>					
7	Strip footings.	m3	3		
8	Steps.	m3	0.2		
9	Ramps.	m3	0.4		
<u>Finishing top surfaces of concrete smooth with a wood float:</u>					
10	Concrete to falls.	m2	5		
Carried to Collection				R	
Section No. 4					
Bill No. 3					
RAMPS AND STAIRS					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

	<u>Rough Formwork to Sides:</u>				
1	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	13		
	<u>Expansion joints with bitumen impregnated softboard between vertical concrete or brick surfaces:</u>				
2	10mm Joints not exceeding 300mm high (Provisional).	m	2		
	<u>Approved polysulphide sealing compound including backing cord, bond breaker, primer etc.:</u>				
3	10 x 10mm In expansion joints in floors or walls including raking out expansion joint filler as necessary (Provisional).	m	2		
	<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in Class I mortar:</u>				
4	One brick walls.	m2	9		
	<u>Brickwork reinforcement:</u>				
5	150mm Wide reinforcement built in horizontally.	m	34		
	<u>Facebricks (FBS) prime cost of R7 000.00 per thousand excluding VAT delivered to the site pointed with square ruled recessed horizontal and vertical joints:</u>				
6	Extra over brickwork for face brickwork externally.	m2	5		
	<u>Untinted granolithic on concrete:</u>				
7	20mm Thick on treads and risers of steps including readings.	m2	3		
	<u>Reinforced concrete pipes with interlocking joints. Class 75D stormwater pipe as described:</u>				
Carried to Collection				R	
Section No. 4					
Bill No. 3					
RAMPS AND STAIRS					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

Note: Joints of pipes to be twice wrapped with grade U24 filter fabric 200mm wide and with 200mm overlap.

- | | | | |
|---|---|----|---|
| 1 | 300mm Stormwater laid in ground under ramp not exceeding 1000mm including all excavations in earth, bedding cradle and blanket fill of selected granular material, main fill compacting in layers not exceeding 150mm thick and carting off surplus displaced material. | m | 2 |
| 2 | Extra for building ends into one brick wall and making good. | No | 2 |

Carried to Collection

R

Section No. 4
 Bill No. 3
 RAMPS AND STAIRS
MPENDULO PUBLIC P SCHOOL
PROVISIONAL BILLS OF QUANTITIES

Section No. 4

Bill No. 3

RAMPS AND STAIRS

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

203

204

205

206

Carried Forward to Summary of Section No. 4

R

Section No. 4

Bill No. 3

RAMPS AND STAIRS

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No		Quantity	Rate	Amount
	<u>BILL No. 4</u>			
	<u>EXTERNAL WORK (PROVISIONAL)</u>			
	The Tenderer is referred to the relevant Clauses in the separate document Model Preambles for Trades (1999 Edition), the Department of Public Works document No. OW 371 Specification of Materials and Methods to be used and to the Supplementary Preambles which are incorporated at the front of these Bills of Quantities.			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Proprietary products in descriptions:</u>			
	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.			
	<u>FENCING (PROVISIONAL)</u>			
	<u>Clearing of site:</u>			
1	Allow for clearing site for the width of 1,000 mm where fencing runs are to be erected including removing trees, shrubs etc. not exceeding 200mm girth, grubbing up roots and roughly levelling.	m	104	
	<u>Galvanised posts:</u>			
2	60mm Diameter galvanised steel intermediate fencing post, 2,100mm long fitted with a pressed steel mushroom cap, post fitted with 150 x 150 x 3mm flange plate welded to bottom and embedded in 300 x 300 x 600mm mass concrete (15 MPa) base.	No	24	
3	100mm Ditto as end post, fitted with one 60mm diameter galvanised steel stay set raking and with top end flattened and twice bolted through post with M8 galvanised bolts, with post and stay both embedded in mass concrete (15 MPa) bases as last.	No	6	
4	100mm Ditto as straining or corner post, but fitted with two 60mm diameter galvanised steel raking stays.	No	9	
	Carried to Collection		R	
	Section No. 4 Bill No. 4 FENCING MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES			

1	150mm Diameter ditto as gate post, but fitted with one 60mm diameter galvanised steel raking stay, with post and stay both embedded in 400 x 400 x 600mm mass concrete (15 MPa) bases (Provisional).	No	2
<u>Fencing:</u>			
2	Fencing formed of 50 x 100 x 2.5mm diameter galvanised weldmesh 1,600 m high with vertical wires facing outwards secured with "Howgring" clips or 1.6mm galvanised binding wire at 300 mm centres to top and bottom straining wires and 700 mm centres to four intermediate straining wires (straining wires elsewhere measured) including holes through posts.	m	104
3	Six strands of 4mm galvanised straining wires secured to fencing posts with doubled 2mm galvanised wire inserted through hole in post and turned a minimum of four turns around straining wire and attached to straining frame at one end with not less than four turns and the other end to straining bolts (elsewhere measured).	m	104
<u>Sundries:</u>			
4	12 mm Diameter galvanised mild steel straining eye bolt with hook, threaded portion and two nuts and washers, including hole through post.	No	104

Carried to Collection

R

Section No. 4

Bill No. 4

FENCING

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 4

Bill No. 4

FENCING

COLLECTION

Total Brought Forward from Page No.

**Page
No**

208

209

Amount**Carried Forward to Summary of Section No. 4**

R

Section No. 4

Bill No. 4

FENCING

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Item No		Quantity	Rate	Amount
	<u>BILL No. 5</u>			
	<u>STORMWATER CHANNELS, APRONS AND SIDEWALKS</u>			
	<u>MODEL PREAMBLES</u>			
	<u>Note:</u>			
	For Preambles see "PW 371 - A Edition 2.1 - Construction Works: Specifications, General Specification" as published by the Department of Public Works (Edition 2.1 July 2014).			
	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.			
	<u>STORMWATER CHANNELS</u>			
	<u>In situ concrete channels:</u>			
1	600 x 150mm 20Mpa open concrete stormwater channel with 560 x 60mm deep "V" channel, on suitable 150mm subbase material compacted to 93% Mod A.A.S.H.T.O. density, including all necessary excavations, formwork, compaction, grading, carting away, etc.	m	8	
2	Extra over for angles, intersections, ends, dressing into sides of catchpits, etc	No	16	
3	900 x 150mm 20Mpa open concrete stormwater channel with 860 x 90mm deep "V" channel, on suitable 150mm subbase material compacted to 93% Mod A.A.S.H.T.O. density, including all necessary excavations, formwork, compaction, grading, carting away, etc.	m	99	
4	Extra over for angles, intersections, ends, dressing into sides of catchpits, etc	No	16	
	Carried to Collection			R
	Section No. 4			
	Bill No. 5			
	STORMWATER RETICULATION			
	MPENDULO PUBLIC P SCHOOL			
	PROVISIONAL BILLS OF QUANTITIES			

1	Extra over for widening concrete to form spreader 1800mm wide extreme for a length of 600mm and bedding 120mm stone pitching in concrete spaced at 200mm centre spacings to falls including brushing concrete between stones.	No	2		
	<u>Gabions and Reno Matresses:</u>				
2	Form Gabion size 1000 x 1800 x 500mm deep using 50mm galvanized diamond mesh stitched closed and lined with u14 Bidum and filled with 100mm stones including necessary excavating, carting away etc.	No	2		
	<u>SIDEWALKS AND PAVING</u>				
	<u>Site clearance:</u>				
3	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m2	82		
	<u>Open face excavation not exceeding 2m deep:</u>				
4	Over site to reduce levels and depositing excavated material in prescribed stock piles on site.	m3	25		
	<u>Extra over bulk excavation in earth for excavation in:</u>				
5	Soft rock.	m3	3		
6	Hard rock.	m3	2		
	<u>Extra over all excavations for carting away:</u>				
7	Surplus material from stock piles on site to a dumping site to be located by the contractor.	m3	25		
	<u>Keeping excavations free of water:</u>				
8	Keeping excavations free of water.		Item		
	<u>Earth filling supplied by the contractor under pavings etc:</u>				
9	Over site of SUBGRADE material compacted to 95% Mod A.A.S.H.T.O. density.	m3	12		
	Carried to Collection			R	
	Section No. 4				
	Bill No. 5				
	STORMWATER RETICULATION				
	MPENDULO PUBLIC P SCHOOL				
	PROVISIONAL BILLS OF QUANTITIES				

	<u>Compaction of surfaces.</u>				
1	Compaction of ground surface under roads 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	82		
	<u>25MPa/20mm concrete:</u>				
2	Paving surface beds cast in panels.	m3	7		
	<u>Finishing top surfaces of concrete smooth with a wood float:</u>				
3	Paving, etc to slight falls.	m2	82		
	<u>Rough Formwork to Sides:</u>				
4	Edges, risers, ends and reveals not exceeding 300mm high or wide.	m	58		
	<u>Brick in header course bedded in ground including concrete haunching:</u>				
5	Face brick as edge kerbing, including excavation, backfilling, compacting, and 300mm wide x 200mm deep continuous concrete haunching etc.	m	58		
Carried to Collection					R
Section No. 4					
Bill No. 5					
STORMWATER RETICULATION					
MPENDULO PUBLIC P SCHOOL					
PROVISIONAL BILLS OF QUANTITIES					

Section No. 4

Bill No. 5

STORMWATER RETICULATION

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

211

212

213

Carried Forward to Summary of Section No. 4

R

Section No. 4

Bill No. 5

STORMWATER RETICULATION

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Bill No	SECTION SUMMARY - SECTION NO.4 - EXTERNAL WORKS	Page No	Amount
1	BULK EARTHWORKS	197	
2	RAINWATER TANKS	202	
3	RAMPS AND STAIRS	207	
4	FENCING	210	
5	STORMWATER RETICULATION	214	
Carried to Final Summary			R
Section No. 4 MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES			

GAS INSTALLATION

1 Provide the sum of R50 000.00 for Gas Installation

Item 50,000.00

2 Add: Mark-up

%

3 Add: Attendance

%

JOINERY FITTINGS

4 Add the sum of R 80 000.00 (Eighty Thousand Rand) for Joinery Fittings.

Item 80,000.00

5 Add: Profit

%

6 Add: Attendance

%

TEMPORARY ABLUTIONS

7 Provide the sum of R 250 000.00 (Two Hundred and Fifty Thousand Rand) for the Supply, Servicing and maintenance of temporary ablutions for the duration of the project and Removal thereof on completion.

Item 250,000.00

8 Add: Profit

%

9 Add: Attendance

%

BUDGETARY ALLOWANCES**The following budgetary allowances are for work to be executed at rates in the bills of quantities or to be agreed by the Principal agent:****COMMUNITY LIAISON OFFICER**

10 Provide the sum of R35 000.00 for the employment of a Community Liaison Officer to be employed by the Main Contractor and be paid an allowance of R7 000.00 a month for the full contract duration.

Item 35,000.00

11 Add: Mark-up

%

Carried to Collection**R**

Section No. 5

Bill No. 1

PROVISIONAL SUMS, BUDGETARY ALLOWANCES, EC

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

REPAIRS TO EXISTING CARPORTS

- 1 Allow the Budgetary Allowance of R 20 000.00 (Twenty Thousand Rand) for the minor repairs to existing carports, to be detailed at a later stage.

Item 20,000.00

SIGNAGE

- 2 Allow the Budgetary Allowance of R 5 000.00 (Five Thousand Rand) for the replacing of the main building signage.

Item 5,000.00

ROOF TRUSS STRENGTHENING

- 3 Allow the Budgetary Allowance of R 50 000.00 (Fifty Thousand Rand) for the additional bracing, sizing of members, etc. to the timber roof structure to the existing buildings to repair any damaged members to the roof trusses.

Item 50,000.00

Carried to Collection

R

Section No. 5

Bill No. 1

PROVISIONAL SUMS, BUDGETARY ALLOWANCES, EC

MPENDULO PUBLIC P SCHOOL

PROVISIONAL BILLS OF QUANTITIES

Section No. 5

Bill No. 1

PROVISIONAL SUMS, BUDGETARY ALLOWANCES, ECT.

COLLECTION

Total Brought Forward from Page No.

**Page
No****Amount**

216

217

218

Carried to Final Summary

R

Section No. 5

Bill No. 1

PROVISIONAL SUMS, BUDGETARY ALLOWANCES, EC

MPENDULO PUBLIC P SCHOOL**PROVISIONAL BILLS OF QUANTITIES**

Section No	FINAL SUMMARY	Page No	Amount
1	SECTION NO.1 - PRELIMINIARIES AND GENERAL	43	
2	SECTION NO.2 - EXISTING BUILDINGS	112	
3	SECTION NO.3 - NEW BUILDING WORKS	194	
4	SECTION NO.4 - EXTERNAL WORKS	215	
5	SECTION NO.5 - PROVISIONAL SUMS , BUDGETARY ALLOWANCES, ECT.	219	
	Sub - Total		R
	<u>CONTINGENCY PROVISIONS</u>		
	Allow the Budgetary Provision of R 400 000.00 (Four Hundred Thousand Rand) for construction contingencies of a general nature and for the finalisation of design detailing. This sum, or any portion thereof, shall be expended at the sole discretion of the Principal Agent. Any residual balance remaining subsequent to such expenditure shall be deducted in its entirety from the Contract Sum.	Item	400,000.00
	Sub - Total		R
	Add Value - Added Tax at the rate applicable as at Tender closing date.		R
	Sub - Total		R
	Carried to Form of Tender		R
	MPENDULO PUBLIC P SCHOOL PROVISIONAL BILLS OF QUANTITIES		