

Item No	Quantity	Rate	Amount
<p><b><u>SECTION 1 - PRELIMINARIES</u></b></p>			
<p><b><u>BILL NO. 1</u></b></p>			
<p><b><u>PRELIMINARIES</u></b></p>			
<p>-----</p>			
<p><b><u>BUILDING AGREEMENT AND PRELIMINARIES</u></b></p>			
<p>The JBCC Series 2000 Principal Building Agreement (March 2005 edition 4.1) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described together with the associated documentation as prepared by the Joint Building Contracts Committee</p>			
<p>The JBCC Preliminaries (May 2005 edition) published by the Joint Building Contracts Committee for use with the said JBCC Principal Building Agreement shall be deemed to be incorporated in these bills of quantities</p>			
<p>The Contractor is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause thereof</p>			
<p>These clauses are hereinafter referred to by clause number and heading only. Where standard clauses or alternatives are not entirely applicable to this contract such modifications, corrections or supplements as will apply are given under each relevant clause heading and such modifications, corrections or supplements shall take precedence notwithstanding anything contrary contained in the abovementioned documents</p>			
<p>Where any item is not relevant to this specific contract such item is marked N/A, signifying "not applicable"</p>			
<p>The Bills of Quantities have been drawn up in accordance with the "Standard System of Measuring Building Work Seventh Edition (Revised 2015)" published by The South African Association of Quantity Surveyors</p>			
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The quantities or specifications contained in these bills of quantities are not to be used for the calculation or ordering of materials.

**PREAMBLES FOR TRADES**

The General Preambles for Trades (2017 edition) as published by The Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained

Where Architect's or Engineer's specifications or drawings (where issued) are in conflict with the above Preambles, etc, the Architect's or Engineer's specification and drawings, as the case may be, are to take preference

Where the drawings and Architect's or Engineer's specifications are in conflict, the Contractor is to obtain written clarification from the Principal Agent prior to the closing of tenders

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

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**PRICING OF PRELIMINARIES**

If option A as set out in clause B10.3.1 hereinafter is to be used for the adjustment of the preliminaries each item priced is to be allocated to one or more of the three categories "F", "V" or "T" as the case may be below such item, where:

- F - An amount which shall not be varied (Fixed)
- V - An amount which shall be varied in proportion to the contract value as compared with the contract sum (Value)
- T - An amount which shall be varied in proportion to the construction period as compared to the initial construction period excluding revisions to the construction period for which the Contractor is not entitled to adjustment of the contract value in terms of the agreement (Time)

Items not priced in these Preliminaries shall be deemed to be included elsewhere in these Bills of Quantities

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**SECTION A: JBCC PRINCIPAL BUILDING AGREEMENT**

**DEFINITIONS**

1 1.0 Definitions and Interpretation

1.0 Clause

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

"**COMMENCEMENT DATE**" means the date that the **agreement**, made in terms of the Form of Offer and Acceptance, comes into effect

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 "**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.

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Clause 1.6.4 is amended by replacing it with the following:

No clause

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**OBJECTIVE AND PREPARATION**

2 2.0 Offer, Acceptance and Performance

F: ..... V: ..... T:  
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3 3.0 Documents

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

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4 4.0 Design Responsibility

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5 5.0 Employer's Agent

5.1.2 is amended to include clauses 32.6.3, 34.3 and 34.4

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6 6.0 Site Representative

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7 7.0 Compliance with Regulations

Note: The provisions herein include inter alia, compliance with all the requirements set out in the Construction Regulations, 2003 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993), and in particular with Regulation 5(1) requiring the compilation of a health and safety plan, as well as Regulation 6(1) requiring the appointment of a construction supervisor

See also clause C10 of Section C - Specific Preliminaries

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8 8.0 Works Risk

F: ..... V: ..... T:  
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9 9.0 Indemnities

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10 **10.0 WORKS INSURANCES**

Clause 10.0 is amended by the addition of the following clauses:

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**10.5 Damage to the Works**

- (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
- (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**
- (c) The **employer** shall carry the risk of damage to or destruction of the **works** and material paid for by the **employer** that is the result of the excepted risks as set out in 10.6
- (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

**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 neglect of any person for whose actions the **employer** is legally liable

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- (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 neglect 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**
- (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 and will remain adequately insured or insured 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**

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**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

**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

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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

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11 11.0 Liability Insurances

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12 12.0 Effecting Insurances

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13 13.0 *No clause*

N/A

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14 14.0 SECURITY

Clauses 14.1 - 14.8 are amended by replacing them with the following:

14.1 In respect of contracts with a **contract sum** up to R1 million, the **security** to be submitted by the **contractor** to the **employer** will be as a payment reduction of five per cent (5%) 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 *mutatis mutandi* 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 In respect of contracts with a **contract sum** above R1 million, the **contractor** shall have the right to select the **security** to be provided in terms of 14.3, 14.4, 14.5, 14.6, or 14.7 as stated in the **schedule**. Such **security** shall be provided to the **employer** within twenty-one (21) **calendar days** from **commencement date**. Should the **contractor** fail to select the **security** to be provided or should the **contractor** fail to provide the **employer** with the selected **security** within twenty-one (21) **calendar days** from **commencement date**, the **security** in terms of 14.7 shall be deemed to have been selected.

14.3 Where **security** as a cash deposit of ten per cent (10%) of the **contract sum** (excluding VAT) has been selected:

14.3.1 The **contractor** shall furnish the **employer** with a cash deposit equal in value to ten per cent (10%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date**

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14.3.2 Within twenty-one (21) **calendar days** of the date of **practical completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to three per cent (3%) of the **contract value** (excluding VAT), and refund the balance to the **contractor**

14.3.3 Within twenty-one (21) **calendar days** of the date of **final completion** of the **works** the **employer** shall reduce the cash deposit to an amount equal to one per cent (1%) of the **contract value** (excluding VAT) and refund the balance to the **contractor**

14.3.4 On the date of payment of the amount in the final **payment certificate**, the **employer** shall refund the remainder of the cash deposit to the **contractor**

14.3.5 The **employer** shall be entitled to recover expense and loss from the cash deposit 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 cash deposit **security** or portions thereof to the **contractor**

14.3.6 The parties expressly agree that neither the **employer** nor the **contractor** shall be entitled to cede the rights to the deposit to any third party

14.4 Where **security** as a variable construction guarantee of ten percent (10%) of the **contract sum** (excluding VAT) has been selected:

14.4.1 The **contractor** shall furnish the **employer** with an acceptable variable construction guarantee equal in value to ten per cent (10%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date**

14.4.2 The variable construction guarantee shall reduce and expire in terms of the Variable Construction Guarantee form included in the invitation to tender

14.4.3 The **employer** shall return the variable construction guarantee to the **contractor** within fourteen (14) **calendar days** of it expiring

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14.4.4 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall issue a written demand in terms of the variable construction guarantee

14.5 Where **security** as a fixed construction guarantee of five per cent (5%) of the **contract sum** (excluding VAT) and a five per cent (5%) payment reduction of the value certified in the payment certificate (excluding VAT) has been selected:

14.5.1 The **contractor** shall furnish a fixed construction guarantee to the **employer** equal in value to five per cent (5%) of the **contract sum** (excluding VAT)

14.5.2 The fixed construction guarantee shall come into force on the date of issue and shall expire on the date of **practical completion**

14.5.3 The **employer** shall return the fixed construction guarantee to the **contractor** within fourteen (14) **calendar days** of it expiring

14.5.4 The payment reduction of the value certified in a **payment certificate** shall be in terms of 31.8 (A) and 34.8

14.5.5 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** shall be entitled to issue a written demand in terms of the fixed construction guarantee or may recover from the payment reduction or may do both

14.6 Where **security** as a cash deposit of five per cent (5%) of the **contract sum** (excluding VAT) and a payment reduction of five per cent (5%) of the value certified in the **payment certificate** (excluding VAT) has been selected:

14.6.1 The **contractor** shall furnish the **employer** with a cash deposit equal in value to five per cent (5%) of the **contract sum** (excluding VAT) within twenty-one (21) **calendar days** from **commencement date**

14.6.2 Within twenty-one (21) **calendar days** of the date of **practical completion** of the **works** the **employer** shall refund the cash deposit in total to the **contractor**

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14.6.3 The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(A)

14.6.4 Where the **employer** has a right of recovery against the **contractor** in terms of 33.0, the **employer** may issue a written notice in terms of 33.4 or may recover from the payment reduction or may do both

14.7 Where **security** as a payment reduction of ten per cent (10%) of the value certified in the **payment certificate** (excluding VAT) has been selected:

14.7.1 The payment reduction of the value certified in a **payment certificate** shall be *mutatis mutandi* in terms of 31.8(B)

14.7.2 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 or portions thereof to the **contractor**

14.8 Payments made by the guarantor to the **employer** in terms of the fixed or variable construction guarantee shall not prejudice the rights of the **employer** or **contractor** in terms of this **agreement**

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

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**EXECUTION**

15 **15.0 PREPARATION FOR AND EXECUTION OF THE WORKS**

Clause 15.1.1 is amended by replacing it with:

No Clause

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 twenty-one (21) **calendar days of commencement date**

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

Give the **contractor** possession of the **site** within ten (10) **working days** of the **contractor** complying with the terms of 15.1.2 and 15.1.4

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16 **16.0 Access to the Works**

F: ..... V: ..... T:  
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17 **17.0 Contract Instructions**

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18 **18.0 Setting out of the Works**

F: ..... V: ..... T:  
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19 **19.0 Assignment**

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20	<p>20.0 Nominated Subcontractors</p> <p>20.1.3 is amended by replacing it with the following:</p> <p>Note: See item B9.1 hereinafter for adjustment of attendance on nominated subcontractors executing work allowed for under provisional sums</p> <p>F: ..... V: ..... T: .....</p>	Item
21	<p>21.0 Selected Subcontractors</p> <p>21 is amended by replacing it with:</p> <p>No Clause</p> <p>F: ..... V: ..... T: .....</p>	N/A
22	<p>22.0 Employer's Direct Contractors</p> <p>F: ..... V: ..... T: .....</p>	Item
23	<p>23.0 Contractor's Domestic Subcontractors</p> <p>F: ..... V: ..... T: .....</p> <p><b><u>COMPLETION</u></b></p>	Item
24	<p>24.0 Practical Completion</p> <p>F: ..... V: ..... T: .....</p>	Item
25	<p>25.0 Work's Completion</p> <p>F: ..... V: ..... T: .....</p>	Item
26	<p>26.0 Final Completion</p> <p>F: ..... V: ..... T: .....</p>	Item
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27	<p>27.0 Latent Defects Liability Period</p> <p>F: ..... V: ..... T: .....</p>	Item
28	<p>28.0 Sectional Completion</p> <p>F: ..... V: ..... T: .....</p>	Item
29	<p>29.0 Revision of Date for Practical Completion</p> <p>F: ..... V: ..... T: .....</p>	Item
30	<p>30.0 Penalty for Noncompletion</p> <p>F: ..... V: ..... T: .....</p>	Item
<b><u>PAYMENT</u></b>		
31	<p><b>31.0 INTERIM PAYMENT TO THE CONTRACTOR</b></p> <p>31.8 is amended by replacing it with the following two alternative clauses:</p> <p><b>Alternative A</b></p> <p>31.8(A) Where a <b>security</b> is selected in terms of 14.1; 14.5 or 14.6, the value of the <b>works</b> in terms of 31.4.1 and <b>materials and goods</b> 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 per cent (95%) of such value in interim <b>payment certificates</b> issued up to the date of <b>practical completion</b></p> <p>31.8(A).2 Ninety-seven per cent (97%) of such value in interim <b>payment certificates</b> issued on the date of <b>practical completion</b> and up to but excluding the date of <b>final completion</b></p>	
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31.8(A).3 Ninety-nine per cent (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

31.8(A).4 One hundred per cent (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**

**Alternative B**

31.8(B) Where **security** is a payment reduction in terms of 14.7 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:

31.8(B).1 Ninety per cent (90%) of such value in interim **payment certificates** issued up to the date of **practical completion**

31.8(B).2 Ninety-seven per cent (97%) of such value in interim **payment certificates** issued on the date of **practical completion** and up to but excluding the date of **final completion**

31.8(B).3 Ninety-nine per cent (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

31.8(B).4 One hundred per cent (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**

Clause 31.12 is amended by deleting the following:

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	<p>Payment shall be subject to the <b>employer</b> giving the <b>contractor</b> a tax invoice for the amount due</p> <p>F: ..... V: ..... T: .....</p>	Item
32	<p><b>32.0 Adjustment to the Contract Value</b></p> <p>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:</p> <p>"due to no fault of the <b>contractor</b>"</p> <p>F: ..... V: ..... T: .....</p>	Item
33	<p><b>33.0 RECOVERY OF EXPENSE AND LOSS</b></p> <p>Clause 33.2 is amended by adding the following clauses:</p> <p>33.2.9 the <b>contractor's</b> failure or neglect to commence with the <b>works</b> on the dates prescribed in the contract</p> <p>33.2.10 the <b>contractor's</b> failure or neglect to proceed with the <b>works</b> in terms of the contract</p> <p>33.2.11 the <b>contractor's</b> failure or neglect for any reason to complete the <b>works</b> in accordance with the contract</p> <p>33.2.12 the <b>contractor's</b> refusal or neglect to comply strictly with any of the conditions of contract or any <b>contract instructions</b> and/or orders in writing given in terms of the contract</p> <p>33.2.13 the <b>contractor's</b> estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa</p> <p>F: ..... V: ..... T: .....</p>	Item
<b>Carried Forward</b>		R
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34 34.0 Final Account and Final Payment

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”

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

35 35.0 Payment to other Parties

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

**CANCELLATION**

**36.0 CANCELLATION BY EMPLOYER - CONTRACTOR’S DEFAULT**

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

36.0 is amended by the addition of the following clause:

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

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36 **37.0 CANCELLATION BY EMPLOYER - LOSS AND DAMAGE**

37.0 is amended by the addition of the following clause:

37.5 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

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

37 **38.0 CANCELLATION BY CONTRACTOR - EMPLOYER'S DEFAULT**

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

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

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

38 39.0 Cancellation - Cessation of the Works

F: ..... V: ..... T:  
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39 40.0 Dispute Settlement

40.2.2 is amended by replacing “one (1) year” with “three (3) years”

40.6 is amended by removing the reference to:

No 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 cost concerning the mediation and equally share the costs of the mediator and related costs

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

**SUBSTITUTE PROVISIONS**

40 41.0 State Clauses

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

Item

**CONTRACT VARIABLES**

**THE SCHEDULE (DPW04EC)**

41 42.0 E-TENDER INFORMATION

Tenderers are referred to section "C1.2 Contract Data" on page 56 for variables pertaining to this contract

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**SECTION B: JBCC PRELIMINARIES**

**1.0 DEFINITIONS AND INTERPRETATION**

42 1.1 Definitions and interpretation

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

Item

**2.0 DOCUMENTS**

43 2.1 Checking of documents

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

Item

44 2.2\* Provisional bills of quantities

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

Item

45 2.3\* Availability of construction documentation

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

Item

46 2.4\* Interests of agents

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

47 2.5 Priced documents

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

48 2.6 Tender submission

Clause 2.6 is amended by replacing “JBCC Form of Tender” with “Form of Offer and Acceptance (DPW07)”

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**3.0 THE SITE**

49	3.*1 Defined works area F: ..... V: ..... T: .....	Item
50	3.2* Geotechnical investigation F: ..... V: ..... T: .....	Item
51	3.3 Inspection of the site  Tenderers shall complete the Site Inspection Certificate (DPW16 EC) included in the tender documents and return the same with the tender submission.  F: ..... V: ..... T: .....	Item
52	3.4* Existing premises occupied F: ..... V: ..... T: .....	Item
53	3.5* Previous work - dimensional accuracy F: ..... V: ..... T: .....	Item
54	3.6 Previous work - defects F: ..... V: ..... T: .....	Item
55	3.7* Services - known F: ..... V: ..... T: .....	Item
56	3.8 Services - unknown F: ..... V: ..... T: .....	Item

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57	3.9* Protection of trees F: ..... V: ..... T: .....	Item
58	3.10 Articles of value F: ..... V: ..... T: .....	Item
59	3.11* Inspection of adjoining properties F: ..... V: ..... T: .....	Item
<b><u>4.0 MANAGEMENT OF CONTRACT</u></b>		
60	4.1 Management of the works F: ..... V: ..... T: .....	Item
61	4.2 Programme for the works F: ..... V: ..... T: .....	Item
62	4.3 Progress meetings F: ..... V: ..... T: .....	Item
63	4.4 Technical meetings F: ..... V: ..... T: .....	Item
64	4.5 Labour and plant records F: ..... V: ..... T: .....	Item
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**5.0 SAMPLES, SHOP DRAWINGS AND MANUFACTURERS' INSTRUCTIONS**

65 5.1 Samples of materials  
 F: ..... V: ..... T:  
 .....

Item

66 5.2 Workmanship samples  
 F: ..... T: ..... V:  
 .....

Item

67 5.3 Shop drawings  
 F: ..... V: ..... T:  
 .....

Item

68 5.4 Compliance with manufacturers' instructions  
 F: ..... T: ..... V:  
 .....

Item

**6.0 TEMPORARY WORKS AND PLANT**

69 6.1 Deposits and fees  
 F: ..... V: ..... T:  
 .....

Item

70 6.2\* Enclosure of the works  
 F: ..... V: ..... T:  
 .....

Item

71 6.3 Advertising  
 F: ..... V: ..... T:  
 .....

Item

72 6.4\* Plant, equipment, sheds and offices  
 F: ..... V: ..... T:  
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73	6.5* Main notice board			
	F: ..... V: ..... T: .....		Item	
74	6.6* Subcontractors' notice board			
	F: ..... V: ..... T: .....		Item	
		<b><u>7.0 TEMPORARY SERVICES</u></b>		
75	7.1 Location			
	F: ..... V: ..... T: .....		Item	
76	7.2& Water			
	F: ..... V: ..... T: .....		Item	
77	7.3& Electricity			
	F: ..... V: ..... T: .....		Item	
78	7.4& Telecommunication facilities			
	F: ..... V: ..... T: .....		Item	
79	7.5& Ablution facilities			
	F: ..... V: ..... T: .....		Item	
		<b><u>8.0 PRIME COST AMOUNTS</u></b>		
80	8.1 Responsibility for prime cost amounts			
	F: ..... V: ..... T: .....		Item	
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**9.0 ATTENDANCE ON N/S SUBCONTRACTORS**

81 9.1 General attendance

The schedule rates providing for attendance on **nominated subcontractors** and other **contractors**, will be adjusted only if the scope of the work has changed

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

82 9.2\* Special attendance

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

Item

83 9.3 Commissioning - fuel, water and electricity

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

Item

**10.0 FINANCIAL ASPECTS**

84 10.1 Statutory taxes, duties and levies

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

Item

85 10.2 & Payment for preliminaries

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

Item

86 10.3 & Adjustment of preliminaries

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

Item

87 10.4 Payment certificate cash flow

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

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**11.0 GENERAL**

88	11.1* Protection of the works F: ..... V: ..... T: .....	Item
89	11.2* Protection / isolation of existing / sectionally occupied works F: ..... V: ..... T: .....	Item
90	11.3 Security of the works F: ..... V: ..... T: .....	Item
91	11.4 Notice before covering work F: ..... V: ..... T: .....	Item
92	11.5* Disturbance F: ..... V: ..... T: .....	Item
93	11.6* Environmental disturbance F: ..... V: ..... T: .....	Item
94	11.7 Works cleaning and clearing F: ..... V: ..... T: .....	Item
95	11.8 Vermin F: ..... V: ..... T: .....	Item
96	11.9 Overhand work F: ..... V: ..... T: .....	Item

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97	11.10 Instruction manuals and guarantees F: ..... V: ..... T: .....	Item
98	11.11 As built information F: ..... V: ..... T: .....	Item
99	11.12 Tenant installations F: ..... V: ..... T: .....	Item
<b><u>12.0 SCHEDULE OF VARIABLES</u></b>		
12.1 PRE-TENDER INFORMATION		
12.1.1 Provisional bills of quantities [2.2]		
YES		
12.1.2 Availability of construction documentation [2.3]		
YES		
12.1.3 Interests of agents [2.4]		
N/A		
12.1.4 Defined works area [3.1]		
Give details and/or refer Architect's site plan drawing no where available		
12.1.5 Geotechnical Investigation [3.2]		
Geotechnical investigation report where available		
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<p style="text-align: center;"><b>Brought Forward</b></p> <p>12.1.6 Existing premises occupied [3.4] The existing buildings on the site is occupied by school learners and staff</p> <p>12.1.7 Previous work - dimensional accuracy [3.5] N/A</p> <p>12.1.8 Previous work - defects [3.6] N/A</p> <p>12.1.9 Services - known [3.7] Not known</p> <p>12.1.10 Protection of trees [3.9] Trees not being removed must be protected.</p> <p>12.1.11 Inspection of adjoining properties [3.11] This also applies to roads and services, etc.</p> <p>12.1.12 Enclosure of the works [6.2] No specific requirements</p> <p>12.1.13 Offices [6.4.3] The Contractor shall provide, maintain and remove on completion of the works an office for the exclusive use of the Principal Agent, minimum size 6 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</p>	<p>R</p>
<p style="text-align: center;"><b>Carried Forward</b></p> <p>Section No. 1 Preliminaries Bill No. 1 PRELIMINARIES <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>	<p>R</p>

<b>Brought Forward</b>	R
<p>12.1.14 Main notice board [6.5]</p> <p>Provide ONE (1) noticeboards, eg:</p> <p>The Contractor shall provide, erect where directed, maintain and remove on completion of the works a notice board size 3 x 3m, 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</p>	
<p>12.1.15 Subcontractors notice board [6.6]</p> <p>NO</p>	
<p>12.1.16 Water [7.2]</p> <p>Option A (by contractor)</p>	
<p>12.1.17 Electricity [7.3]</p> <p>Option A (by contractor)</p>	
<p>12.1.18 Telecommunications [7.4]</p> <p>Telephone - YES Facsimile - YES Email - YES</p>	
<p>12.1.19 Ablution facilities [7.5]</p> <p>Option A (by contractor)</p>	
<p>12.1.20 Protection of existing/sectionally occupied works [11.2]</p> <p>Protection is required</p> <p>YES</p>	
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<p style="text-align: center;"><b>Brought Forward</b></p> <p>12.1.21 Special attendance [9.2]</p> <p>N/A</p> <p>12.1.22 Protection of the works [11.1]</p> <p>No specific requirements</p> <p>12.1.23 Disturbance [11.5]</p> <p>The Contractor shall be responsible for and take all precautions in controlling all forms of pollution during the contract period due to noise, artificial light, wind-blown sand, dust, etc in the dry season and deposits of mud etc in the wet season by whatever means necessary and daily removal of deposits etc, all to the satisfaction of the Principal Agent and any costs, claims, etc will be for the Contractor's account</p> <p>The surrounding buildings will be occupied and functioning during these works and the Contractor is to ensure that the works are carried out with as little mess and noise as possible and with a minimum of disturbance to adjoining and close buildings and properties and their occupants. The Contractor is to make use of appropriate plant and methods of execution which result in the least possible noise factors. All machinery shall be fully muffled</p> <p>The Contractor shall keep the site, structures and materials well watered during the operations to prevent dust and shall provide, erect and maintain all temporary tarpaulins, dust and weatherproof screens, barriers and temporary plumbing that may be necessary during the progress of the works</p> <p>The Contractor shall ensure that the functioning of the existing School is not disturbed or disrupted, except where special arrangements are made with the Principal Agent</p> <p>The Contractor may not carry out construction operations outside of normal working times without the permission of the Principal Agent</p> <p>12.1.24 Environmental disturbance [11.6]</p> <p>No specific requirements</p>		R	
<p style="text-align: center;"><b>Carried Forward</b></p> <p>Section No. 1 Preliminaries Bill No. 1 PRELIMINARIES <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

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**12.2 POST-TENDER INFORMATION**

12.2.1 Payment of preliminaries

[10.2] Option A or B (post tender)

12.2.2 Adjustment of preliminaries

[10.3] Option A or B (post tender)

12.2.3 Additional agreed preliminaries items

Details: To be agreed post tender where relevant

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**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**

**C1: CONFIDENTIALITY**

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

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

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Item

**C2: TRADE NAMES**

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

If prior written approval for an alternative product is not obtained, it shall be deemed that the tenderer the product described has been tendered for

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**C3: IMPORTED MATERIALS**

102 Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations.

Notwithstanding any provisions elsewhere regarding the adjustment of contract prices, the price of any item, material or equipment listed in terms of this clause shall be excluded from the Contract Price Adjustment Provisions (if applicable)

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

**C4: SECURITY CHECK OF PERSONNEL**

103 The **principal agent** may require the **contractor** to have his personnel and workmen, or a certain number of them, security classified

In the event of the **principal agent** requesting the removal of a person or persons from the **works** for security reasons, the **contractor** shall do so forthwith and shall thereafter ensure that such person or persons are denied access to the **works** and the **site** and/or to any document or information relating to the **works**

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

**C5: CONTRACT INSTRUCTIONS**

104 Contract instructions issued on site are to be recorded in triplicate in a site instruction book which is to be maintained on site by the Contractor

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**C6: SITE LEVELS**

105 Before commencement of the works the Contractor shall carry out and provide the Principal Agent for approval a survey of the existing site levels in sufficient detail to enable the preparation of a final account

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

**C7: UNAUTHORISED PERSONS ON SITE**

106 The Contractor shall not permit unauthorised persons onto and workmen to lodge on the site

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

**C8: PLANT AND LABOUR RECORD**

107 At the end of each week the Contractor shall provide the Principal Agent with a written record, in schedule form, reflecting the number and description of tradesmen and labourers employed by him and all subcontractors on the works each day and the number, type and capacity of all plant, excluding hand tools, currently used on the works

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Item

**C9: USE OF LOCAL LABOUR FROM THE EMPLOYER'S AREAS OF OPERATION**

108 It is a requirement of the contract that the work be executed in such a manner as to maximise the use of local labour from the Employer's areas of operation in order to provide the local community with employment opportunities.

The tenderer is to identify all activities for which it is intended to employ workers from the local community and full details thereof are to be provided in the tender documentation

The total value of the work that is to be of a local labour nature may be a consideration in

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the adjudication process. Once a tender is accepted the activities and number of persons stated in the above-mentioned schedule shall become the minimum contractual commitment. In applying the principles set out above, it is a specific requirement of this tender that the successful tenderer employs, in consultation with the Employer's representative, unemployed persons from the ranks of the local communities and the immediate surroundings, who possess the appropriate skills required for a contract of this nature

- In order to achieve the recruitment of local labour, the Employer will establish, a database of unemployed persons, indicating their specialised training, previous experience and employment, etc. The successful tenderer will be required to directly employ suitable persons recruited from the employer's database and ensure that all legislative requirements regarding their employment are complied with and provide the Employer with the necessary documentary proof, if required

- The Contractor is required to produce weekly records suitably detailed to enable the Employer's representative to monitor the achievement of the required local labour percentages. The Contractor is required to provide the Employer's database for the purposes of assessing skills transfer from informal skills training

- The Contractor is required to provide informal skills training so that the required standard of workmanship is maintained

- Any difficulty experienced by the tenderer/Contractor in the procurement of the required percentages of local labour is to be referred immediately to the Employer's representative

- In respect to "Target Labour", the minimum rate for any and all workers contracted for this project shall be R120 per day

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**C10: COMMUNITY LIASON OFFICER**

109

It is a requirement of this Contract that a Community Liaison officer (CLO) be appointed for the area represented by the Tender. The function of the CLO shall be to represent the local community in matters concerning the use of local labour on the works and to assist with and facilitate communication between the Contractor, the Engineer and the local communities. The period of appointment of the CLO shall be as stated in the Contract for Temporary Employment as a Community Liaison officer referred to below. It must be noted that the date of commencement of temporary employment of the CLO shall be no later than the date of commencement of the Contract. The identification of the approved CLO to be appointed by the Contractor under the Contract shall be resolved by the Contractor, the particular Ward Councillors in collaboration with the Local Communities.

It will be required, therefore, that the successful Tenderer (i.e. the Contractor) enter into a contract for the employment of the above-mentioned CLO, the parties to which will be the Contractor, the RDP/Development Forum and the CLO. To this end a specimen Form of Contract for the Temporary Employment as a Community Liaison Officer is included in this document; this Form of Contract sets out, inter alia, the agreement between the parties, the duties and conditions of employment of the CLO (including the rate of remuneration to be paid).

**As said contract will be between the Contractor and the CLO, all costs involved shall be borne by the Contractor and the tender shall be deemed to include for this.**

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

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**C11: GUARANTEES**

110

Where guarantees are called for, the Contractor shall obtain a written guarantee, addressed to the Employer, from the firm supplying the materials and/or doing the work and shall deliver same to the Principal Agent no later than the works completion date.

The guarantee shall state that workmanship, materials and installation are guaranteed for a specified period from the final completion dated and that any defects that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice from the Principal Agent to do so. This guarantee will not be enforced if the work is damaged by defects in the construction of the building in which case the responsibility for replacement shall rest entirely with the Contractor.

The Principal Agent shall be the sole judge of the cause responsible for defect of the works and his decision shall be final and binding in terms of clause 40.2 of the agreement

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

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**C12: WARRANTIES FOR MATERIAL AND WORKMANSHIP**

111

Where warranties for materials and/or workmanship are called for, the Contractor shall obtain a written warranty, addressed to the Employer, from the firm supplying the materials and/or doing the work and shall deliver same to the Principal Agent on the certified practical completion of the contract

The warranty shall state that workmanship, materials and installation are warranted for a specified period from the date of final completion and that any defects that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice to do so. The warranty will not be enforced if the work is damaged by defects in the construction of the building in which case the responsibility for replacement shall rest entirely with the Contractor

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

.....

Item

**C13: OVERTIME**

112

Should overtime be required to be worked for any reason whatsoever, the costs of such overtime are to be borne by the Contractor unless the Principal Agent has specifically authorised, in writing, prior to execution thereof, that costs for such overtime are to be borne by the Employer

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

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Item

**Carried Forward**

R

Section No. 1  
Preliminaries

Bill No. 1  
PRELIMINARIES

**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

Brought Forward

R

**C14: CO-OPERATION OF CONTRACTOR FOR COST MANAGEMENT**

113

It is specifically agreed that the Contractor accepts the obligation of assisting the agents in implementing proper cost management on this project. The Contractor will be advised by the Principal Agent of all cost management procedures which will be implemented to ensure that the final account does not exceed the budget

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

Item

**C15: FINANCIAL INVESTIGATION**

114

Tenderers must be prepared to furnish the following documentation at own cost within seven (7) days of being called upon to do so:

- Audited financial statements for the past three financial years plus a certified financial statement covering the period from the end of the last financial year to date. If audited statements are not readily available provisional certified statements must be submitted
- A resolution of the board of directors authorising the signatory to certify such statements
- An extract of the relevant memorandum and article(s) of association from which it is clear that the company is empowered to issue such statement
- A list of all major shareholders indicating the percentage shareholding of each

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

Item

Carried Forward

R

Section No. 1  
Preliminaries  
Bill No. 1  
PRELIMINARIES  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

**Brought Forward**

R

**C16:REINSTATEMENT OF DAMAGED AREAS ON THE SITE OR EMPLOYERS' PROPERTIES IN GENERAL CAUSED BY CONSTRUCTION OPERATIONS, ETC.**

115

Before commencing the works, the Contractor shall arrange with the Principal Agent to inspect, among others, existing buildings, structures, roads, pavings, kerbs, channels and fences on the site or Employers' properties in general

The Contractor shall note in writing, all conditions that the works could affect and copy the Principal Agent accordingly. The Contractor should pay particular attention to cracks, defects and existing levels related to structures, roads, pavings, kerbs, channels and fences, which later could be claimed to have been caused or disturbed by the construction operations

Where instructed by the Principal Agent, levels and photographs shall be taken by the Contractor and the cost thereof shall be for the Employer's account. Certified copies shall be lodged with the Principal Agent

The Contractor will be held responsible for maintaining the above in its present condition during execution of the works and will be liable for all costs relating to the repairing or replacing of damaged areas caused by the construction operations

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

.....

Item

**SUMMARY OF CATEGORIES**

Category : Fixed R.....

Category : Value R.....

Category : Time R.....

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**Carried to Final Summary**

R

Section No. 1

Preliminaries

Bill No. 1

PRELIMINARIES

**Construction of Water, Sanitation and Fencing**

**Fofoza Primary School**

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 2</u></b></p>			
<p><b><u>BILL NO.1</u></b></p>			
<p><b><u>ALTERATIONS (PROVISIONAL)</u></b></p>			
<p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition), as published by the Association of South African Quantity Surveyors, shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items, fully described in the said General Preambles, will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>View Site:</u></b></p>			
<p>Before submitting his tender, the Contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished.</p>			
<p>No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained</p>			
<p><b><u>Old materials to become property of the Contractor:</u></b></p>			
<p>Old materials from demolitions, except where described as to be re-used or handed over, become the property of the Contractor, who must allow credit for same in the last item of the "Demolitions" trade</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 2 Demolitions Bill No. 1 DEMOLITIONS <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>			
		R	

**Brought Forward**

R

**Old materials to be re-used:**

None of the old materials are to be used for new work, except where specifically described as being set aside for re-use

**Old materials, debris, etc to be carted away:**

All old materials from the demolitions, except where described as to be re-used or handed over, as well as all rubbish, debris, etc must be regularly carted from the site and not be allowed to accumulate on or around the site

**Handing over of materials:**

Where certain materials or articles from demolitions are described as to be "handed over to the Employer", it shall be taken to mean "handed over by the Contractor to the Principal Agent" and such materials or articles shall be properly stored by the Contractor until handing over thereof and shall include all necessary transport

The Contractor must obtain an official receipt from the Principal Agent listing the materials or articles and dates of handing over

Should the Contractor fail to submit the receipt when requested to do so, it shall be deemed that the materials or articles are still in his possession and he will be held liable to the Employer for the full replacement value thereof, which amount will be deducted from any monies due to the Contractor

**Explosives:**

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

**Carried Forward**

R

Section No. 2  
Demolitions  
Bill No. 1  
DEMOLITIONS

**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

<b>Brought Forward</b>		R
<b><u>General:</u></b>		
<p>The Contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the Principal Agent</p> <p>Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the Principal Agent</p>		
<b><u>Hazardous materials:</u></b>		
<p>Demolitions of buildings, services, external works, site services, etc are to include for the safe removal and disposal of <u>asbestos or asbestos products or other hazardous materials</u> by approved <b>Registered Specialists</b></p> <p style="text-align: center;">-----</p>		
<b><u>BARRICADES, SCREENS, ROOFS, ETC.</u></b>		
<b><u>Temporary barriers, screens, roofs, etc including removal:</u></b>		
1	"Joluka Orange/ Yellow" or similar approved safety barrier netting 1500mm high including suitable timber framing, corners, ends, etc	m 100
<b><u>REMOVAL OF EXISTING WORK</u></b>		
<b><u>Breaking up and removing:</u></b>		
2	Taking out and removing, grubbing up concrete foundations and concrete to toilet pits not exceeding 1500mm deep, filling in holes with imported earth filling, compacted to 93% Mod AASHTO density to existing 7000 x 4000mm toilet structures	No 2
<b>Carried Forward</b>		R
<p>Section No. 2                  Demolitions                  Bill No. 1                  DEMOLITIONS  <b>Construction of Water, Sanitation and Fencing                  Fofeza Primary School</b></p>		

<b>Brought Forward</b>		<b>R</b>
<b><u>DEMOLITIONS, ETC</u></b>		
<b><u>DEMOLISH EXISTING TOILET STRUCTURES</u></b>		
3	Demolish existing pit toilet structure overall size 7000 x 4000 x 3000mm high including desludging waste to municipality waste site, hacking and removing foundations, concrete surface beds, walls, doors, windows, door frames, ironmongery, zink, plumbing fittings complete, backfilling, compacting and clear debris and etc. Service Provider to submit relevant and valid permit of disposal to the municipal waste and all rubble's to be carted away from site.	No 2
<b><u>CHEMICAL TOILETS RENTALS</u></b>		
<b><u>The following is for the rental of chemical toilets and tenderer to allow for establishment and deestablishment of facilities and rentals during construction:</u></b>		
4	Allow an amount R120 000. 00 ( One Hundred and Twenty Thousand Rand ) for rentals and servicing of Chemical Toilets during construction after demolishing of existing pit toilets until the new facilities / structures or renovations are completed and officially handed over to the user department, such temporal ablutions to be serviced and kept in good conditions at all times. Client will only compensate the cost of rentals and etc until original completion period or an approved extension of time period granted with cost, should the tenderer delay this activity, tenderer will be solely responsible to cover the cost of rentals until actual completion or sectional completion.	Item
5	Allow for profit on above if required	Item
6	Allow for giving every facility to Specialists as described	Item
<b>Carried to Final Summary</b>		<b>R</b>
Section No. 2 Demolitions Bill No. 1 DEMOLITIONS <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>		

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 3</u></b></p>			
<p><b><u>BILL NO.1</u></b></p>			
<p><b><u>ALTERATIONS (PROVISIONAL)</u></b></p>			
<p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition), as published by the Association of South African Quantity Surveyors, shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items, fully described in the said General Preambles, will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>View site:</u></b></p>			
<p>Before submitting his tender, the Contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished.</p>			
<p>No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained</p>			
<p><b><u>Old materials to become property of the Contractor:</u></b></p>			
<p>Old materials from alterations, except where described as to be re-used or handed over, become the property of the Contractor, who must allow credit for same in the last item of the "Alterations" trade</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 3                  Alterations to 2 x SD6 Educators Ablutions                  Bill No. 1                  ALTERATIONS  <b>Construction of Water, Sanitation and Fencing                  Fofeza Primary School</b></p>		R	

**Brought Forward**

R

**Old materials to be carted away:**

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

**Old materials to be re-used:**

None of the old materials are to be used for new work, except where specifically described as being set aside for re-use

**Handing over of materials:**

Where certain materials or articles from demolitions or alterations are described as to be "handed over to the Employer", it shall be taken to mean "handed over by the Contractor to the Principal Agent" and such materials or articles shall be properly stored by the Contractor until handing over thereof and shall include all necessary transport

The Contractor must obtain an official receipt from the Principal Agent listing the materials or articles and dates of handing over

Should the Contractor fail to submit the receipt when requested to do so, it shall be deemed that the materials or articles are still in his possession and he will be held liable to the Employer for the full replacement value thereof, which amount will be deducted from any monies due to the Contractor

**Explosives:**

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

**Carried Forward**

R

Section No. 3  
 Alterations to 2 x SD6 Educators Ablutions  
 Bill No. 1  
 ALTERATIONS  
**Construction of Water, Sanitation and Fencing  
 Fofzo Primary School**

**Brought Forward**

R

**GENERAL**

The contractor shall carry out the whole of the work with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide and erect any temporary tarpaulins and temporary plumbing that may be necessary during the progress of the works, all to the satisfaction of the Architect, and remove when directed.

Any water supplies pipes and other piping that may be met with and found necessary to disconnect or cut, shall be effectually stopped or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the Architect.

Doors, fanlights, fittings, frames, linings, etc shall be thoroughly overhauled before re-fixing including taking off, easing and re-hanging, cramping up, re-wedging as required and making good cramps, dowels, etc and easing, oiling, adjusting and repairing ironmongery if necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted wood to match timber.

Where doors, windows, etc are described as taken out this shall be understood to include for removal of all beads, architraves, ironmongery, etc and doors which are re-fixed are to be provided with new architraves (elsewhere measured ).

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

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

Allow for making good all existing plastered walls where damaged by furniture, etc, and stopping up all screw and holes before painting.

**Carried Forward**

R

Section No. 3  
Alterations to 2 x SD6 Educators Ablutions  
Bill No. 1  
ALTERATIONS  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

**Brought Forward**

R

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

The contractor will be required to take all dimensions affecting existing building on the site and he will be held solely responsible for the accuracy of all such dimensions.

**Hazardous materials:**

Demolitions of buildings, services, external works, site services, etc are to include for the safe removal and disposal of asbestos or asbestos products or other hazardous materials by approved Registered Specialists

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**TEMPORARY BARRIERS, SCREENS, ETC**

**Temporary barriers, screens, etc including removal:**

1	"Joluka Orange/ Yellow" or similar approved safety barrier netting 1500mm high including suitable timber framing, corners, ends, etc	m	42
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**REMOVAL OF EXISTING WORK**

**Breaking up and removing reinforced concrete, including cutting off and removing reinforcement:**

2	150mm Thick surface beds	m2	40
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**Breaking down and removing brickwork, etc:**

3	Half brickwalls	m2	6
4	One brickwalls	m2	12

**Carried Forward**

R

Section No. 3  
 Alterations to 2 x SD6 Educators Ablutions  
 Bill No. 1  
 ALTERATIONS  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Brought Forward			R
<b><u>Carefully taking out and handing over to the Employer doors, windows, etc including taking out and removing thresholds, sills, etc from brickwork and preparing openings to receive new similar doors, windows, etc (elsewhere measured) and making good cement plaster on both sides and into reveals:</u></b>			
5	Timber single door and frame not exceeding 2,5m <sup>2</sup>	No	10
<b><u>Taking out/off and removing ironmongery:</u></b>			
6	Window stays	No	60
7	Window handles	No	60
<b><u>Taking out and removing piping, sanitary fittings, etc including cutting off as necessary, disconnecting piping from fittings and blocking off and making good damaged plasterwork to walls and screeds to floors (all redecoration work elsewhere):</u></b>			
8	Vitreous china wall hung urinal with flush valve	No	10
<b><u>Taking out/off and removing glass and mirrors:</u></b>			
9	Glass panes not exceeding 0,1m <sup>2</sup> from steel windows with putty, including cleaning out rebates and preparing for new glass	m2	20
<b><u>OPENINGS THROUGH EXISTING WALLS, ETC</u></b>			
<b><u>Breaking out for and forming plain openings through brick walls, including new prestressed concrete lintels, making good cement plaster on both sides and into reveals and 20MPa concrete thresholds with steel trowelled finish (making good paintwork elsewhere):</u></b>			
10	Opening 900 x 2032mm high through half brick one brick wall	No	2
<b><u>MAKING GOOD OF FINISHES, ETC</u></b>			
<b><u>Making good internal/external cement plaster:</u></b>			
11	Walls in patches	m2	50
Carried Forward			R
Section No. 3 Alterations to 2 x SD6 Educators Ablutions Bill No. 1 ALTERATIONS Construction of Water, Sanitation and Fencing Fofza Primary School			

Brought Forward

R

**REFURBISHMENT OF ENVIRO LOO COMPONENTS**

**The following for the refurbishment of existing enviroloo systems:**

12 Allow an amount of R 160 000.00 (One Hundred and Sixty, Thousand Rands) for the refurbishment of enviro components including scope assessments/verifications by Enviro Loo, installation carried out by the Contractor including dislodging of waste, replacements of any components recommended by Enviro Loo. Enviro Loo will conduct inspections and issue Completion Compliance Certificate.

Item

**INSPECTION BY "ENVIRO LOO"/SUPPLIER:**

13 Allow an amount of R 8000.00 (Eight Thousand Rand Only) for the two site visits to be made by the "enviroo loo" suppliers to assist/support the contractor in the installation of the "enviro loo" and a final inspection to be ascertain the enviro loo has been installed correctly at which time a Certificate of Compliance should be issued between Mvula Trust/Limpopo Department of Education and Enviro Loo Options Limpopo.

Item

14 Profit and attendance for the above

Item

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

R

Section No. 3  
 Alterations to 2 x SD6 Educators Ablutions  
 Bill No. 1  
 ALTERATIONS  
**Construction of Water, Sanitation and Fencing  
 Fofeza Primary School**

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 3</u></b></p>			
<p><b><u>BILL NO.2</u></b></p>			
<p><b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b></p>			
-----			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Cost of tests:</u></b></p>			
<p>The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SANS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Principal Agent.</p>			
<p>The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Principal Agent. (Test cubes are measured separately)</p>			
<p><b>Carried Forward</b></p>		R	
<p>Section No. 3                      Alterations to 2 x SD6 Educators Ablutions                      Bill No. 2                      CONCRETE, FORMWORK AND REINFORCEMENT  <b>Construction of Water, Sanitation and Fencing                      Fofza Primary School</b></p>			

**Brought Forward**

R

**Breeze concrete:**

Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated

**Lightweight concrete:**

Lightweight concrete shall have a density of 600kg/m<sup>3</sup> for the top 50mm and 400kg/m<sup>3</sup> for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm

**Waterproof concrete:**

"Waterproof concrete" shall have the same properties as normal concrete, but the following shall be modified to make the the concrete more water-tight:

1. a cement/water ratio of minimum 1.9 and maximum 2.1
2. minimum OPC content of 300kg/m<sup>3</sup>
3. Polypropylene micro fibres added to concrete at rate of 182 million per m<sup>3</sup>

**Formwork:**

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

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

**Carried Forward**

R

Section No. 3  
 Alterations to 2 x SD6 Educators Ablutions  
 Bill No. 2  
 CONCRETE, FORMWORK AND REINFORCEMENT  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

<b>Brought Forward</b>			R
Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described			
-----			
<b><u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>			
<b><u>25MPa/19mm concrete:</u></b>			
	Surface beds cast in panels	m3	2
	Surface beds cast in panels on waterproofing	m3	2
	Aprons cast in panels	m3	3
	Ramps	m3	1
<b><u>TEST BLOCKS</u></b>			
1	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	Sets	1.0
<b><u>CONCRETE SUNDRIES</u></b>			
<b><u>Finishing top surfaces of concrete smooth with a steel trowel:</u></b>			
2	Surface beds, slabs, etc	m2	68
3	Surface beds, slabs, etc to falls	m2	8
<b><u>Finishing top surfaces of concrete smooth with a wood float:</u></b>			
4	Ramps to falls	m2	4
<b><u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u></b>			
<b><u>Rough formwork to sides:</u></b>			
5	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	47
<b>Carried Forward</b>			R
Section No. 3 Alterations to 2 x SD6 Educators Ablutions Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

Brought Forward

R

**MOVEMENT JOINTS, ETC**

**Expansion joints with 10mm softboard between vertical concrete and brick surfaces:**

6	Not exceeding 300mm high to edges of surface beds	m	10
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**REINFORCEMENT (PROVISIONAL)**

**Fabric reinforcement:**

7	Type 193 fabric reinforcement in concrete surface beds, slabs, etc	m2	80
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**Carried Forward to Summary of Section No. 3**

R

Section No. 3  
 Alterations to 2 x SD6 Educators Ablutions  
 Bill No. 2  
 CONCRETE, FORMWORK AND REINFORCEMENT  
**Construction of Water, Sanitation and Fencing  
 Fofzo Primary School**

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 3</u></b></p>			
<p><b><u>BILL NO.3</u></b></p>			
<p><b><u>WATERPROOFING</u></b></p>			
<p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Waterproofing:</u></b></p>			
<p>Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets, etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs</p>			
<p>-----</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 3                  Alterations to 2 x SD6 Educators Ablutions                  Bill No. 3                  WATERPROOFING  <b>Construction of Water, Sanitation and Fencing                  Fofeza Primary School</b></p>			
		<p>R</p>	

Brought Forward

**DAMPPROOFING OF WALLS AND FLOORS**

**One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:**

1	Under surface beds	m2	68	
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R

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

Section No. 3  
 Alterations to 2 x SD6 Educators Ablutions  
 Bill No. 3  
 WATERPROOFING  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

R

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 3</u></b></p>			
<p><b><u>BILL NO.4</u></b></p>			
<p><b><u>CARPENTRY AND JOINERY</u></b></p>			
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<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Fixing:</u></b></p>			
<p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete</p>			
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given separately elsewhere</p>			
<p><b><u>Joinery:</u></b></p>			
<p>Descriptions of frames shall be deemed to include frames, transoms, rails, etc</p>			
<p>Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts</p>			
<p><b>Carried Forward</b></p>		R	
<p>Section No. 3                  Alterations to 2 x SD6 Educators Ablutions                  Bill No. 4                  CARPENTRY AND JOINERY  <b>Construction of Water, Sanitation and Fencing                  Fofza Primary School</b></p>			

**Brought Forward**

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**Particle board**

All particle board shall comply with SANS 50312 having the required marking as per SANS 50312/EN 312

**Decorative thermosetting plastic laminate covering:**

Laminate covering shall be glued under pressure and edge strips of same shall be butt jointed at junctions with adjacent similar finish

**Sizes:**

Sizes are nominal and the Contractor shall make allowance in his prices for minor variances in stated finished sizes of timber doors, door members, door frames, architraves, etc

**Prices**

Prices for all joinery work are to include for general framing, housing and notching, arris rounded angles, glueing, blocking, planting on, screwing, adhesives, dowels, pellets, cross tongues, screws and nails and setting up complete and also for all square cutting and waste. Tops shall be secured with metal or hardwood buttons.

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**ROOFS, ETC**

**Sawn softwood grade 4:**

1	38 x 114mm Wall plates	m	125
2	38 x 114mm Cross bracing	m	23
3	50 x 76mm Support batten	m	23
4	50 x 76mm Purlins	m	285

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<b><u>Wrought softwood grade 4:</u></b>		
5	50 x 76mm Purlins	m 47
<b><u>Sundries:</u></b>		
6	Two coats creosote on sawn timbers	m2 99
<b><u>EAVES, VERGES, ETC</u></b>		
<b><u>Medium density plain fibre-cement fascias and barge boards:</u></b>		
7	19 x 235mm Fascias and barge boards, including aluminium H-profile jointing strips	m 79
<b><u>DOORS, ETC</u></b>		
<b><u>Wrought meranti doors hung to steel frames:</u></b>		
8	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard	No 10
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<p><b><u>SECTION NO. 3</u></b></p>			
<p><b><u>BILL NO.5</u></b></p>			
<p><b><u>IRONMONGERY</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Proprietary items:</u></b></p>			
<p>Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items</p>			
<p>Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.</p>			
<p>Prices are to be based on the specific products/articles specified.</p>			
<p>On request, returnable samples are to be provided to the Project Manager for consideration</p>			
<p><b><u>Locks:</u></b></p>			
<p>Notwithstanding Clause 2, Item 3 of the "Ironmongery" trade of the Standard System (7th Edition, 2015) of Measuring Building Wor, descriptions of locks shall be deemed to include two keys per lock</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 3                  Alterations to 2 x SD6 Educators Ablutions                  Bill No. 5                  IRONMONGERY  <b>Construction of Water, Sanitation and Fencing                  Fofza Primary School</b></p>		R	

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**Finishes to ironmongery:**

Where applicable, finishes to ironmongery are indicated by suffixes in accordance with the following list:

BS Satin bronze lacquered  
 CH Chromium plated  
 SC Satin chromium plated  
 SE Silver enamelled  
 GE Grey enamelled  
 AN Anodised natural  
 AS Anodised silver  
 AB Anodised bronze  
 AG Anodised gold  
 ABL Anodised black  
 PB Polished brass  
 PL Polished and lacquered  
 PT Epoxy coated  
 SD Sanded  
 BBS Brushed stainless steel

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**CATCHES, CABIN HOOKS, ETC**

1	150mm Cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	5
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**LOCKS****Approved:**

2	50mm Padlock	No	5
3	Four lever lockset	No	5
4	Indicator lockset	No	3

**HANDLES****"Union Assa Abloy" or similar approved:**

5	ASSA ABLOY Anodised Silver straight pull handle (Code: AL5515-300BBAS) with 300mm fixing centres	Pairs	3.0
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<b><u>PUSH PLATES AND KICK PLATES</u></b>		
<b><u>"Union Assa Abloy" or similar approved:</u></b>		
<b><u>1.2mm Thick satin finished "Union" stainless steel plates countersunk screwed along edges at not exceeding 200mm centres</u></b>		
6	200 x 800mm Type "SS5089-200W" kicking plate	No 5
7	200 x 800mm Type "SS5089-200W" push plate	No 5
<b><u>DOOR CLOSERS</u></b>		
<b><u>"Dorma" or similar approved:</u></b>		
8	"Dorma" TS73N/EN3-4 parallel arm door closer delayed closing-push side fitting.	No 4
<b><u>LETTERS, NAMEPLATES, ETC</u></b>		
<b><u>"Union Assa Abloy" or similar approved:</u></b>		
9	75 x 150mm Natural anodised aluminium plate with male or female symbol	No 2
10	"Ref. SS5066E-06SSE14" stainless steel pictogram engraved with a disabled sign	No 1
<b><u>SUNDRIES</u></b>		
11	25mm Diameter wall mounted door stop plugged	No 5
<b><u>BATHROOM FITTINGS</u></b>		
<b><u>"Vaal Paragon" or similar approved</u></b>		
12	32mm Type 9 back grab rail 800mm long plugged	No 1
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13	32mm Type 8 side grab rail 900mm girth plugged  <b><u>"Kimberley-Clark" or similar approved:</u></b>	No	1
14	"Ref. SQ2 code 405607B" white lockable toilet roll holder	No	1
15	Brushed stainless steel body, rust resistant, she bin, approximately 330 x 280 x 180mm etc	No	2
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<p><b><u>BILL NO.6</u></b></p>			
<p><b><u>METALWORK</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Descriptions of bolts, anchors, etc:</u></b></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>Items described as "holed for bolt(s)" shall be deemed to exclude the bolts, unless otherwise described</p>			
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres</p>			
<p><b>Carried Forward</b></p>			
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**Fixing:**

Unless otherwise described, descriptions of items shall be deemed to include for fixing to brickwork or concrete

Where items are described as "bolted", the bolts are measured elsewhere as stated in clause N.7 of the Model Preambles

**References:**

References in descriptions of windows, doors, gates, etc refer to the respective types of windows, doors, etc detailed in the Architect's window schedules numbered

- T-2002
- T-2003
- T-2004
- T-2005

and bound into the back of these bills of quantities

Tenderers are to price the following items in conjunction with the above Architect's drawings, etc and no claim arising from brevity of descriptions in these bills of quantities, of items shown on the Architect's drawings, etc shall be entertained

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**STEEL GATES, SCREENS, ETC**

**Welded screens and gates, to walls:**

1	Single gate and frame 813 x 2032mm high of 25 x 25 x 2mm hollow section frame and 25 x 25 x 2mm hollow section horizontal middle rail filled in with 12 x 12mm square section vertical rails at 75mm centers and fitted with a pair of suitable hinges welded to frame and with locking mechanism for padlock all in and including outer frame of 25 x 25 x 2mm hollow section welded frame bolted to brickwork	No	5
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**PRESSED STEEL DOOR FRAMES**

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

2	Frame for door size 813 x 2032mm high	No	5
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**SUNDRY STEELWORK**

**Corner protectors:**

3	50 x 50 x 4mm Angle section fixed to edge of floor	m	10
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<p><b><u>SECTION NO. 3</u></b></p> <p><b><u>BILL NO.7</u></b></p> <p><b><u>PLASTERING</u></b></p> <p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Moisture tests:</u></b></p> <p>Before any finishes, coverings, etc are applied to screeds, plastering, etc or any other in-situ finish, moisture tests are to be carried out to the complete satisfaction of the Project Manager to ensure that these surfaces have the correct moisture content for the finish to be applied</p> <p><b><u>Labours, etc</u></b></p> <p>Labours such as fair, rounded and chamfered edges, trowel cuts, throats, V-joints, angles, etc shall be deemed to be included in the descriptions</p>			
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**Sample Panels**

A sample panel size 1m x1m, of each of the various plaster type wall and floor finishes in this contract, shall be prepared for the approval of the Project Manager and the cost of the sample panel(s) shall be deemed to be included in the overall costs of the relevant wall and floor finishes

**GRANOLITHIC**

**Method:**

The method to be used shall be either the monolithic method or the bonded method

**Preparation:**

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

**Mix:**

Unless otherwise described, granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SANS 1083 and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the size of the coarse aggregate shall be increased to the maximum size compatible with the thickness of the granolithic

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**Panels:**

Granolithic shall be laid in panels not exceeding 14m<sup>2</sup> for monolithic finishes, not exceeding 9,5m<sup>2</sup> for bonded finishes and not exceeding 6m<sup>2</sup> for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1,5 times its width

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

**Laying:**

Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels

Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels

After wood floating, the monolithic and bonded granolithic shall remain undisturbed until bleeding has ceased and the surface has stiffened. Any remaining bleed water and laitance shall then be removed and the surface steel trowelled or power floated

**Curing, seasoning and protection:**

Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying

**Colour:**

Coloured granolithic shall be tinted with an approved colouring pigment mixed into a true and even colour

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**TINTED WHITE CEMENT SCREEDS**

Tinted screed shall be composed of one bag White Portland Cement and two wheelbarrows "Malmesbury" sand. Surfaces shall be finished with a steel trowel to leave a smooth finish and coated with two coats "Earthcote S.I. Floorcote" two-pack polyurethane floor sealer applied as per the manufacturer's recommendations

NOTE: Tinted screeds are to be strengthened with "Primal Eccos" acrylic polymer (15% of the water volume is to be substituted with the acrylic polymer during the mixing process)

Coarse sand is to be used for these screeds

All tinting, finishing, strengthening, etc are to be mixed, applied, etc strictly in accordance with the manufacturer's instructions

**CEMENT PLASTER**

Unless otherwise described, cement plaster shall be taken to mean Class 1 cement plaster i.e. 1:4 cement:sand plaster (common cement)

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**SCREEDS**

**3:1 Cement plaster screeds power floated, on concrete:**

1	30mm Thick on floors and landings	m2	47
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**INTERNAL PLASTER**

**Cement plaster steel trowelled, on brickwork:**

2	On walls	m2	160
3	On narrow widths	m2	5

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<p><b><u>BILL NO.8</u></b></p>			
<p><b><u>PLUMBING AND DRAINAGE (PROVISIONAL)</u></b></p>			
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<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Wire gratings:</u></b></p>			
<p>Descriptions of gutter outlets, etc shall be deemed to include wire balloon gratings</p>			
<p><b><u>Stormwater channels:</u></b></p>			
<p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc and disposal of surplus material on site</p>			
<p><b><u>French drains:</u></b></p>			
<p>Descriptions of french drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, approved geofabric filter blanket over stone, 300mm earthfilling over and disposal of surplus material on site</p>			
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**Septic tanks:**

Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site

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

Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)

Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)

Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)

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

**Sealing of edges:**

Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved mildew resistant silicone sealant and prices must include therefor

**uPVC pipes and fittings:**

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

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

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**uPVC pressure pipes and fittings:**

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

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

**High density polyethylene (HDPe) pipes and fittings:**

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

**"Polycop" polypropylene pipes:**

Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings

Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions

**Copper pipes:**

Pipes shall be hard drawn and half-hard "Maksal" pipes of the class described. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), Class 2 (half-hard) and Class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-siphon 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

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

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**Reducing fittings:**

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm, only the largest end or branch 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 claims for extra bushes, reducers, etc will be entertained

**Fixing of pipes:**

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

**Paper wrapping to pipes:**

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

**Disinfection of water pipework:**

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

**"Densyl" petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd.:**

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with suitable overlaps

Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, "Layflat" sheeting, securing of same, etc

Prices for wrapping of pipes shall include for all work as described to couplings in the length

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**Laying, backfilling, bedding, etc of pipes:**

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

Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following:

- SANS 1200L : Medium-pressure pipelines
- SANS 1200LD : Sewers
- SANS 1200LE : Stormwater drainage

Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200DB : Earthworks (Pipe trenches)

Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200LB : Bedding (Pipes)

Unless otherwise described, bedding of rigid pipes shall be Class B bedding

**General:**

Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc are given separately)

Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 98% Mod AASHTO density and disposal of surplus material on site

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

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Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured) and shall have straight or side outlets and "P" or "S" traps as necessary

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

**As-built drawings:**

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

**Proprietary items:**

Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items

Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.

Prices are to be based on the specific products/articles specified.

On request, returnable samples are to be provided to the Project Manager for consideration

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**SANITARY FITTINGS**

**"Vaal" or similar approved:**

1	455 x 290mm "Hibiscus" 7050 wash hand basin bolted to wall	No	1
2	"Daisy Elite" 772403 close-coupled WC suite comprising pan with double flap heavy duty thermoset seat (Code: 8531Z0) and matching 9 litre cistern	No	10

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3	"Pearl Paraplegic" 7300SC paraplegic WC suite with lid, fitments, purpose made CP side flush lever and purpose made double flap white epoxy painted wooden seat	No 3
4	Flat back urinal overall size 295 x 315 x 415mm high with 40mm chromium plated domical grating (Code 878720 ) and top inlet spreader (Code 8543) with two hanger brackets with flushmaster junior (Code 812720) hung to wall	No 14
<b><u>Supply and install "Enviroloo systems" or similar approved:</u></b>		
5	"Enviro Loo System FG-1040 STDCA/A Standard" strictly in accordance with manufacturers instructions, unit comprising of top unit and two x louvered inlets (PL.1), drying plate (PL.2), two x air inlets (PL.3), toilet pan, seat and lid (PL.4), 3500mm long outlet vent pipe (PL.5), ventilation extraction unit (PL.6) fixed to wall with vent wall bracket (PL.7), 1 bag mounting screws and organic starter, enzyme and toilet cleaner (PL.8) including all necessary interconnector piping between multiple tanks, emergency outlet piping, etc	No 12
6	"Enviro Loo Urinal Evaporative Tank System code FG-862B " strictly in accordance with manufacturers instructions, unit comprising of urinal evaporative tank (PL.1), urinal bowl (PL.5), 3500mm long outlet vent pipe (PL.3), ventilation extraction unit (PL.3) fixed to wall with vent wall bracket (PL.4), 1 bag mounting screws and organic starter, enzyme and toilet cleaner (PL.8) including all necessary piping, traps, etc	No 1
<b><u>Precast concrete wash trough:</u></b>		
7	Standard SABS approved Pre-Cast Concrete Double Wash Trough, 1080 x 650 x 850mm high with support legs fitted with standard 3/4 Brass Garden Taps, including all necessary pipework including soak away approximately 10 meters away from the wash trough, sized at 1000 x 1000 x 1000mm covered with "bidim" complete etc	No 3
<b><u>BUDGETARY ALLOWANCES</u></b>		
<b>Carried Forward</b>		R
Section No. 3 Alterations to 2 x SD6 Educators Ablutions Bill No. 8 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing                      Fofza Primary School</b>		

<b>Brought Forward</b>			R
<b><u>SUPERVISION OF INSTALLATION OF "ENVIRO LOO":</u></b>			
8	Two site visits to be made by the "enviroo loo" suppliers to assist/support the contractor in the installation of the "enviro loo" and a final inspection to be ascertain the enviro loo has been installed correctly at which time a Certificate of Compliance should be issued between Mvula Trust and Enviro Loo Options Limpopo.	Item	
9	Profit and attendance for the above	Item	
<b><u>TRAPS, ETC</u></b>			
<b><u>"Cobra Watertech" or similar approved:</u></b>			
10	50mm Code 365 CP bottle trap	No	5
<b><u>TAPS, VALVES, ETC</u></b>			
<b><u>"Cobra Watertech" or similar approved:</u></b>			
11	19mm chrome plated push button taps to wash troughs	No	5
12	15mm Code 232/350 FCP angle regulating valve and flexible connection pipe	No	10
13	15mm Code 503-21CP elbow action pillar tap	No	10
<b><u>SANITARY PLUMBING</u></b>			
<b><u>uPVC pipes:</u></b>			
14	50mm Pipes	m	20
15	110mm Pipes	m	60
16	50mm Diameter pipe laid in and including trenches not exceeding 1m deep	m	15
<b>Carried Forward</b>			R
Section No. 3 Alterations to 2 x SD6 Educators Ablutions Bill No. 8 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing                      Fofeza Primary School</b>			

Brought Forward			R
17	Ditto, but 110mm diameter	m	30
<b><u>Extra over uPVC pipes for fittings:</u></b>			
18	50mm Bend	No	20
19	50mm Junction	No	10
20	50mm Junction with cleaning eye and lid	No	10
21	110mm Straight pan connector	No	5
22	110mm Bend	No	20
23	110mm Junction	No	10
24	110mm Reducing junction	No	10
25	110mm Access bend	No	10
26	110mm Double junction	No	10
27	110mm "GI Two-way" vent valve	No	5
<b><u>Testing:</u></b>			
28	Testing waste pipe system		Item
<b><u>WATER SUPPLIES</u></b>			
<b><u>Class 16 uPVC pressure pipes with solvent welded joints:</u></b>			
29	32mm Pipes laid in and including trenches not exceeding 1m deep	m	20
30	50mm Pipes laid in and including trenches not exceeding 1m deep	m	30
<b><u>Extra over class 16 uPVC pressure pipes for fittings with solvent welded joints:</u></b>			
31	32mm Bend	No	10
<b>Carried Forward</b>			R
Section No. 3 Alterations to 2 x SD6 Educators Ablutions Bill No. 8 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b>			

		Brought Forward		R
32	32mm Reducer	No	5	
33	32mm Tee	No	5	
34	50mm Bend	No	5	
35	50mm Tee	No	5	
<b><u>Class 1 copper pipes with capillary couplings:</u></b>				
36	15mm Pipe fixed to walls, in chases, etc	m	20	
37	Ditto, but 22mm diameter	m	10	
<b><u>Extra over Class 1 copper pipes for capillary fittings:</u></b>				
38	15mm Fittings	No	5	
39	22mm Fittings	No	2	
<b><u>Testing:</u></b>				
40	Testing water pipe system		Item	
<b>Carried Forward to Summary of Section No. 3</b>				R
Section No. 3				
Alterations to 2 x SD6 Educators Ablutions				
Bill No. 8				
PLUMBING AND DRAINAGE				
<b>Construction of Water, Sanitation and Fencing</b>				
<b>Fofoza Primary School</b>				

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 3</u></b></p>			
<p><b><u>BILL NO.9</u></b></p>			
<p><b><u>GLAZING</u></b></p>			
<p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Float glass:</u></b></p>			
<p>The term "float glass" is used for monolithic annealed glass</p>			
<p><b><u>Laminated glass:</u></b></p>			
<p>Laminated glass to have polyvinyl butyral (PVB) interlayer(s)</p>			
<p>-----</p>			
<p><b><u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u></b></p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 3                  Alterations to 2 x SD6 Educators Ablutions                  Bill No. 9                  GLAZING  <b>Construction of Water, Sanitation and Fencing                  Fofza Primary School</b></p>		<p>R</p>	

<b>Brought Forward</b>		R
<p><b><u>4mm Silvered float glass copper backed mirrors with 10mm bevelled and polished edges fixed with double sided adhesive tape:</u></b></p>		
1	Stainless steel mirror size 350 x 400m plugged to wall with chrome plated screws.	1
	No	
<p><b><u>GLAZING TO STEEL WITH PUTTY</u></b></p>		
<p><b><u>6,38mm Obscure safety glass:</u></b></p>		
2	Panes not exceeding 0,1m <sup>2</sup>	6
	m2	
<p><b>Carried Forward to Summary of Section No. 3</b></p>		
<p>Section No. 3                      Alterations to 2 x SD6 Educators Ablutions                      Bill No. 9                      GLAZING  <b>Construction of Water, Sanitation and Fencing                      Fofzo Primary School</b></p>		
		R

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 3</u></b></p>			
<p><b><u>BILL NO.10</u></b></p>			
<p><b><u>PAINTWORK</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>PREPARATORY WORK TO EXISTING WORK</u></b></p>			
<p><b><u>Previously painted plastered surfaces:</u></b></p> <p>Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and minor cracks shall be opened, filled with a suitable filler and finished smooth</p>			
<p><b><u>Previously painted metal surfaces:</u></b></p> <p>Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 3                  Alterations to 2 x SD6 Educators Ablutions                  Bill No. 10                  PAINTWORK  <b>Construction of Water, Sanitation and Fencing                  Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Previously painted wood surfaces:**

Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth

**PAINT SPECIFICATIONS**

All painting shall be done in accordance with "Plascon", etc specifications, unless otherwise described

**COLOURS**

When staining timber, the resultant colour or shade must be to the complete satisfaction of the Project Manager before any overcoating or preservative is applied

Paintwork is classified in the following different colour groups: "White", "Pastel", "Deep" and "Transparent" in accordance with the "Natural Colour System" (NCS) adopted by the SA National Standards  
Unless otherwise described, all paintwork shall be deemed to be classified in the "White" colour group

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**PAINTWORK, ETC TO NEW WORK**

**ON INTERNAL FLOATED PLASTER SURFACES**

**One coat alkali resistant plaster primer and two coats PVA acrylic emulsion paint on**

1	Walls	m2	25
2	Extra over for paintwork in the "Pastel" colour group	m2	25

**ON FIBRE-CEMENT BOARD SURFACES**

**One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use, on:**

3	Ceilings and beams	m2	49
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**Carried Forward**

R

Section No. 3  
Alterations to 2 x SD6 Educators Ablutions  
Bill No. 10  
PAINTWORK  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

<b>Brought Forward</b>			R
4	Fascias and barge boards, including priming metal jointing strips	m2	10
<b><u>METAL SURFACES WITH</u></b>			
<b><u>One coat alkyd based zinc phosphate primer and two coats premium quality polyurethane enamel paint, on steel:</u></b>			
5	Door frames	m2	5
6	Gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	10
7	Extra over for paintwork in the "Deep" colour group	m2	15
<b><u>ON WOOD SURFACES</u></b>			
<b><u>One coat primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on:</u></b>			
8	Doors	m2	16
9	Extra over for paintwork in the "Pastel" colour group	m2	16
<b><u>PAINTWORK, ETC TO PREVIOUSLY PAINTED WORK</u></b>			
<b><u>ON METAL SURFACES</u></b>			
<b><u>Spot priming bare metal surfaces, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on work in poor condition:</u></b>			
10	Windows with burglar bars	m2	20
11	Extra over for paintwork in the "Deep" colour group	m2	20
<b>Carried Forward to Summary of Section No. 3</b>			R
Section No. 3			
Alterations to 2 x SD6 Educators Ablutions			
Bill No. 10			
PAINTWORK			
<b>Construction of Water, Sanitation and Fencing</b>			
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Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 4</u></b></p>			
<p><b><u>BILL NO.1</u></b></p>			
<p><b><u>EARTHWORKS (PROVISIONAL)</u></b></p> <p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Nature of ground</u></b></p>			
<p>The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "hard rock" or "soft rock".</p>			
<p>The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock".</p>			
<p>The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, therefore "earth", but possibly interspersed with "hard rock".</p>			
<p>Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth". The trial holes also indicate that the water table is at a maximum depth of approximately 1000mm.</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 4 SF6 + SD1 Female and Educators Ablutions Bill No. 1 EARTHWORKS <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>			
		R	

**Brought Forward**

A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured

**Subterranean water:**

No subterranean water is expected

Should the Contractor however, encounter any subterranean water on the site, he shall immediately notify the Principal Agent thereof and submit recommendations for keeping the works free from subterranean water together with all costs involved therewith

**Excavation for working space in rock:**

Notwithstanding clause 10 measurement rule 27 of the Standard System of Measuring Building Work, excavation for working space in material of a more different character (e.g. soft or hard rock) will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be

**Carting away of excavated material**

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

**Filling**

Notwithstanding the reference to prescribed multiple handling in clause 1 page 10 of the Standard System (7th Edition, 2015) of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material

**Carried Forward**

Section No. 4  
SF6 + SD1 Female and Educators Ablutions  
Bill No. 1  
EARTHWORKS  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

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R

**Brought Forward**

R

**Testing:**

*Prices for backfilling to trenches and holes only are to include for all necessary density tests in accordance with SANS 1200D*

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**EXCAVATIONS, FILLING, ETC**

**EXCAVATIONS, ETC**

**Excavation in earth not exceeding 2m deep:**

1	Reduced levels under floors	m3	4
2	Trenches	m3	10
3	Trenches and holes for thickening under surface beds, etc	m3	3

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

4	Soft rock	m3	1
5	Hard rock	m3	1

**Extra over all excavations for carting away:**

6	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	14
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**Risk of collapse of excavations:**

7	Sides of trench and hole excavations not exceeding 1,5m deep	m2	29
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**Keeping excavations free of water:**

8	Keeping excavations free of all water other than subterranean water		Item
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**FILLING ETC**

**Carried Forward**

R

Section No. 4  
 SF6 + SD1 Female and Educators Ablutions  
 Bill No. 1  
 EARTHWORKS  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Brought Forward			R
<b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:</u></b>			
9	Backfilling to trenches, holes, etc	m3	3
<b><u>G5 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:</u></b>			
10	Under floors, steps, pavings, etc	m3	4
<b><u>Compaction of surfaces:</u></b>			
11	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 91% Mod AASHTO density	m2	37
<b><u>Prescribed density tests on filling:</u></b>			
12	"Modified AASHTO Density" test	No	14
<b><u>SOIL POISONING</u></b>			
<b><u>Soil insecticide in accordance with SANS 5859:</u></b>			
13	Soil insecticide (protection against termites) applied as specified under floors, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	37
14	To bottoms and sides of trenches, etc	m2	46
<b>Carried Forward to Summary of Section No. 4</b>			R
Section No. 4			
SF6 + SD1 Female and Educators Ablutions			
Bill No. 1			
EARTHWORKS			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 4</u></b></p> <p><b><u>BILL NO.2</u></b></p> <p><b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b></p> <p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Cost of tests:</u></b></p> <p><b><u>Breeze concrete:</u></b></p> <p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated</p> <p><b><u>Lightweight concrete:</u></b></p> <p>Lightweight concrete shall have a density of 600kg/m<sup>3</sup> for the top 50mm and 400kg/m<sup>3</sup> for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm</p> <p style="text-align: right;"><b>Carried Forward</b></p> <p>Section No. 4 SF6 + SD1 Female and Educators Ablutions Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>			
		R	

**Brought Forward**

R

**Waterproof concrete:**

"Waterproof concrete" shall have the same properties as normal concrete, but the following shall be modified to make the the concrete more water-tight:

1. a cement/water ratio of minimum 1.9 and maximum 2.1
2. minimum OPC content of 300kg/m<sup>3</sup>
3. Polypropylene micro fibres added to concrete at rate of 182 million per m<sup>3</sup>

**Formwork:**

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

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 soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described

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**UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**15MPa/19mm concrete:**

1	Surface blinding under footings and bases	m <sup>3</sup>	1
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**REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**Carried Forward**

R

Section No. 4  
 SF6 + SD1 Female and Educators Ablutions  
 Bill No. 2  
 CONCRETE, FORMWORK AND REINFORCEMENT  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

<b>Brought Forward</b>			R
<b><u>30MPa/19mm concrete:</u></b>			
	Strip footings	m3	4
	Surface beds on waterproofing	m3	6
<b><u>TEST BLOCKS</u></b>			
2	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	3
<b><u>CONCRETE SUNDRIES</u></b>			
<b><u>Finishing top surfaces of concrete smooth with a steel trowel:</u></b>			
3	Surface beds, slabs, etc	m2	28
<b><u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u></b>			
<b><u>Rough formwork to sides:</u></b>			
4	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	48
<b><u>MOVEMENT JOINTS, ETC</u></b>			
<b><u>Expansion joints with 10mm softboard between vertical concrete and brick surfaces:</u></b>			
5	Not exceeding 300mm high to edges of surface beds	m	63
<b><u>Saw-cut joints:</u></b>			
6	6 x 10mm Saw-cut joints in top of concrete	m	95
<b><u>REINFORCEMENT (PROVISIONAL)</u></b>			
<b><u>Mild steel reinforcement to structural concrete work:</u></b>			
7	Mild steel bar reinforcement (8 to 40mm diameter bars)	t	0.09
<b>Carried Forward</b>			R
Section No. 4 SF6 + SD1 Female and Educators Ablutions Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

<b>Brought Forward</b>			R
<b><u>High tensile steel reinforcement to structural concrete work:</u></b>			
8	High tensile steel bar reinforcement (8 to 40mm diameter bars)	t	0.22
<b><u>Fabric reinforcement:</u></b>			
9	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	28
<b>Carried Forward to Summary of Section No. 4</b>			R
Section No. 4 SF6 + SD1 Female and Educators Ablutions Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 4</u></b></p>			
<p><b><u>BILL NO.3</u></b></p>			
<p><b><u>MASONRY</u></b></p>			
<p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
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<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>BRICKWORK</u></b></p>			
<p><b><u>General:</u></b></p>			
<p>Non-load bearing brickwork is to be built to full height less 20mm gap next to the ceiling and is to be left for 14 days before grouting up in 1:3 cement mortar.</p>			
<p><b><u>Sizes in descriptions:</u></b></p>			
<p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p>			
<p><b><u>Hollow walls:</u></b></p>			
<p>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</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 4 SF6 + SD1 Female and Educators Ablutions Bill No. 3 MASONRY <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Bagged and sealed walls:**

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 bitumen emulsion waterproofing coating

**Face bricks :**

Bricks shall be ordered timeously to obtain uniformity in size and colour

All face brickwork shall be regularly cleaned down as the work proceeds and shall be protected as necessary by an approved method

**Pointing:**

Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include smooth floated square recessed, hollow recessed, weathered pointing, etc

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**FOUNDATIONS (PROVISIONAL)****Brickwork of NFP bricks (14 MPa nominal compressive strength) in class 1 mortar:**

1	One brick walls	m2	12
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**2,5mm Brickwork reinforcement:**

2	150mm Wide reinforcement built in horizontally	m	71
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**FACE BRICKWORK****Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints**

3	Extra over brickwork for face brickwork	m2	4
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**SUPERSTRUCTURE****Carried Forward**

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Section No. 4  
SF6 + SD1 Female and Educators Ablutions  
Bill No. 3  
MASONRY  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

Brought Forward			R
<b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar in loadbearing walls etc:</u></b>			
4	One brick walls	m2	67
<b><u>BRICKWORK SUNDRIES</u></b>			
<b><u>Joint forming material in movement joints:</u></b>			
5	12mm Fibre board built in vertically through brick walls	m	61
<b><u>2,5mm Brickwork reinforcement:</u></b>			
6	75mm Wide reinforcement built in horizontally	m	108
7	150mm Wide reinforcement built in horizontally	m	223
<b><u>Prestressed fabricated concrete lintels, including necessary temporary supports:</u></b>			
8	110 x 75mm Lintels in lengths not exceeding 3m long	m	41
<b><u>FACE BRICKWORK</u></b>			
<b><u>Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u></b>			
9	Half brick wall faced on both sides	m2	26
10	Extra over brickwork for face brickwork	m2	114
11	Extra over brickwork for brick-on-edge header course lintel pointed on face and 120mm soffit	m	9
12	Fair raking cutting	m	10
<b><u>Brick-on-edge header course coping, sills, etc. of face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with recessed joints on all exposed faces</u></b>			
13	150mm Wide sills set sloping and slightly projecting	m	8
<b>Carried Forward to Summary of Section No. 4</b>			R
Section No. 4			
SF6 + SD1 Female and Educators Ablutions			
Bill No. 3			
MASONRY			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 4</u></b></p>			
<p><b><u>BILL NO.4</u></b></p>			
<p><b><u>WATERPROOFING</u></b></p>			
<p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Waterproofing:</u></b></p>			
<p>Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets, etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs</p>			
<p>-----</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 4 SF6 + SD1 Female and Educators Ablutions Bill No. 4 WATERPROOFING <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

Brought Forward

R

**DAMPPROOFING OF WALLS AND FLOORS**

**One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B):**

1	In walls	m2	69
2	In walls vertically at reveals	m2	3

**One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:**

3	Under surface beds	m2	34
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**JOINT SEALANTS ETC**

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

4	6 x 10mm In saw cut joints in floors	m	95
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**White silicone sealing compound including backing cord, bond breaker, primer, etc**

5	6 x 10mm In expansion joints in floors, including raking out expansion joint filler as necessary [ LI ]	m	63
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**Carried Forward to Summary of Section No. 4**

R

Section No. 4  
 SF6 + SD1 Female and Educators Ablutions  
 Bill No. 4  
 WATERPROOFING  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 4</u></b></p> <p><b><u>BILL NO.5</u></b></p> <p><b><u>ROOF COVERINGS</u></b></p> <p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p>Profiled metal roof sheeting and accessories shall be supplied with a 10 year guarantee and be installed by an approved installer</p> <p>All fixing holes shall be drilled and not punched</p> <p>Roof covering accessories shall be manufactured from the same material as used for roof covering</p> <p>-----</p> <p><b><u>PROFILED METAL SHEETING AND ACCESSORIES</u></b></p>			
<p><b>Carried Forward</b></p>		R	
<p>Section No. 4            SF6 + SD1 Female and Educators Ablutions            Bill No. 5            ROOF COVERINGS  <b>Construction of Water, Sanitation and Fencing            Fofeza Primary School</b></p>			

Brought Forward			R
	<p><b><u>0,6 mm "Klip-Lok 406" or similar approved light industrial Z275 spelter galvanised steel sheeting, with "Classicoat" finish one side and half coat "Classicoat Grey" other side, and accessories fixed to timber purlins or rails at approximately 1500mm centres:</u></b></p>		
1	Roof coverings with pitch not exceeding 25 degrees	m2	45
	<p><b><u>Accessories:</u></b></p>		
2	Apex flashings 462mm girth	m	9
	<p><b><u>ROOF AND WALL INSULATION</u></b></p> <p><b><u>"Sisalation 405" or similar approved residential grade aluminium foil based insulation:</u></b></p>		
3	Insulation sheeting laid taut over purlins at approximately 1000mm centres and fixed concurrent with roof covering with minimum 150mm stapled laps, including galvanised steel straining wires at not exceeding 400mm centres and double-sided tape at edges where required	m2	45
<p><b>Carried Forward to Summary of Section No. 4</b></p>			R
<p>Section No. 4            SF6 + SD1 Female and Educators Ablutions            Bill No. 5            ROOF COVERINGS  <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b></p>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 4</u></b></p>			
<p><b><u>BILL NO.6</u></b></p>			
<p><b><u>CARPENTRY AND JOINERY</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Fixing:</u></b></p>			
<p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete</p>			
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given separately elsewhere</p>			
<p><b><u>Joinery:</u></b></p>			
<p>Descriptions of frames shall be deemed to include frames, transoms, rails, etc</p>			
<p>Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 4  SF6 + SD1 Female and Educators Ablutions  Bill No. 6  CARPENTRY AND JOINERY  <b>Construction of Water, Sanitation and Fencing  Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Particle board**

All particle board shall comply with SANS 50312 having the required marking as per SANS 50312/EN 312

**Decorative thermosetting plastic laminate covering:**

Laminate covering shall be glued under pressure and edge strips of same shall be butt jointed at junctions with adjacent similar finish

**Sizes:**

Sizes are nominal and the Contractor shall make allowance in his prices for minor variances in stated finished sizes of timber doors, door members, door frames, architraves, etc

**Prices**

Prices for all joinery work are to include for general framing, housing and notching, arris rounded angles, glueing, blocking, planting on, screwing, adhesives, dowels, pellets, cross tongues, screws and nails and setting up complete and also for all square cutting and waste. Tops shall be secured with metal or hardwood buttons.

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**ROOFS, ETC**

**Sawn softwood grade 5:**

1	38 x 114mm Wall plates bolted	m	18
2	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	58
3	50 x 76mm Purlins	m	60

**EAVES, VERGES, ETC**

**Carried Forward**

R

Section No. 4  
 SF6 + SD1 Female and Educators Ablutions  
 Bill No. 6  
 CARPENTRY AND JOINERY  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

<b>Brought Forward</b>		R
<b><u>Medium density plain fibre-cement fascias and barge boards:</u></b>		
4	19 x 235mm Fascias and barge boards, including aluminium H-profile jointing strips	19
	m	
<b><u>DOORS, ETC</u></b>		
<b><u>Wrought meranti doors hung to steel frames:</u></b>		
5	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding including 150mm undercut (D2)	6
	No	
6	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	2
	No	
<b>Carried Forward to Summary of Section No. 4</b>		
Section No. 4		
SF6 + SD1 Female and Educators Ablutions		
Bill No. 6		
CARPENTRY AND JOINERY		
<b>Construction of Water, Sanitation and Fencing</b>		
<b>Fofoza Primary School</b>		
		R

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 4</u></b></p>			
<p><b><u>BILL NO.7</u></b></p>			
<p><b><u>IRONMONGERY</u></b></p>			
<p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Proprietary items:</u></b></p>			
<p>Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items</p>			
<p>Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.</p>			
<p>Prices are to be based on the specific products/articles specified.</p>			
<p>On request, returnable samples are to be provided to the Project Manager for consideration</p>			
<p><b><u>Locks:</u></b></p>			
<p>Notwithstanding Clause 2, Item 3 of the "Ironmongery" trade of the Standard System (7th Edition, 2015) of Measuring Building Wor, descriptions of locks shall be deemed to include two keys per lock</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 4            SF6 + SD1 Female and Educators Ablutions            Bill No. 7            IRONMONGERY  <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b></p>		<p>R</p>	

**Brought Forward**

R

**Finishes to ironmongery:**

Where applicable, finishes to ironmongery are indicated by suffixes in accordance with the following list:

- BS Satin bronze lacquered
- CH Chromium plated
- SC Satin chromium plated
- SE Silver enamelled
- GE Grey enamelled
- AN Anodised natural
- AS Anodised silver
- AB Anodised bronze
- AG Anodised gold
- ABL Anodised black
- PB Polished brass
- PL Polished and lacquered
- PT Epoxy coated
- SD Sanded
- BBS Brushed stainless steel

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**CATCHES, CABIN HOOKS, ETC**

1	150mm Cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	6
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**LOCKS**

**"Union Assa Abloy" or similar approved:**

2	50mm Brass padlock	No	2
3	Four lever lockset	No	2
4	"Ref. CZ80941SC" Indicator bolt	No	6

**HANDLES**

**"Union Assa Abloy" or similar approved:**

5	ASSA ABLOY Anodised Silver straight pull handle (Code: AL5515-300BBAS) with 300mm fixing centres	Pairs	2.0
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**Carried Forward**

R

Section No. 4  
 SF6 + SD1 Female and Educators Ablutions  
 Bill No. 7  
 IRONMONGERY  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Brought Forward		R
<b><u>PUSH PLATES AND KICK PLATES</u></b>		
<b><u>"Union Assa Abloy" or similar approved:</u></b>		
<b><u>1.2mm Thick satin finished "Union" stainless steel plates countersunk screwed along edges at not exceeding 200mm centres</u></b>		
6	200 x 800mm Type "SS5089-200W" kicking plate	12
	No	
<b><u>DOOR CLOSERS</u></b>		
<b><u>"Dorma" or similar approved:</u></b>		
7	"Dorma" TS73N/EN3-4 parallel arm door closer delayed closing-push side fitting	1
	No	
<b><u>LETTERS, NAMEPLATES, ETC</u></b>		
<b><u>"Dorma" or similar approved:</u></b>		
8	DSS-131 Engraved "Female" information sign, plugged	2
	No	
<b><u>SUNDRIES</u></b>		
9	25mm Diameter wall mounted door stop plugged	8
	No	
<b><u>BATHROOM FITTINGS</u></b>		
<b><u>"Vaal Paragon" or similar approved</u></b>		
10	32mm Type 9 back grab rail 800mm long plugged	1
	No	
11	32mm Type 8 side grab rail 900mm girth plugged	1
	No	
<b>Carried Forward</b>		R
Section No. 4 SF6 + SD1 Female and Educators Ablutions Bill No. 7 IRONMONGERY <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b>		



Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 4</u></b></p>			
<p><b><u>BILL NO.8</u></b></p>			
<p><b><u>METALWORK</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Descriptions of bolts, anchors, etc:</u></b></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>Items described as "holed for bolt(s)" shall be deemed to exclude the bolts, unless otherwise described</p>			
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 4 SF6 + SD1 Female and Educators Ablutions Bill No. 8 METALWORK <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>			
		R	

**Brought Forward**

R

**Fixing:**

Unless otherwise described, descriptions of items shall be deemed to include for fixing to brickwork or concrete

Where items are described as "bolted", the bolts are measured elsewhere as stated in clause N.7 of the Model Preambles

**References:**

References in descriptions of windows, doors, gates, etc refer to the respective types of windows, doors, etc detailed in the Architect's window schedules numbered

- 21111/FSPS/S005
- T-2003
- T-2004
- T-2005

and bound into the back of these bills of quantities

Tenderers are to price the following items in conjunction with the above Architect's drawings, etc and no claim arising from brevity of descriptions in these bills of quantities, of items shown on the Architect's drawings, etc shall be entertained

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Section No. 4  
 SF6 + SD1 Female and Educators Ablutions  
 Bill No. 8  
 METALWORK  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Brought Forward		R
<b><u>STEEL GATES, SCREENS, ETC</u></b>		
<b><u>Welded screens and gates, to brickwalls:</u></b>		
1	Single gate and frame size to fit standard door, size 813 x 2032mm high	2
<b><u>PRESSED STEEL DOOR FRAMES</u></b>		
<b><u>1,6mm Double rebated frames suitable for half brick walls:</u></b>		
2	Frame for door size 813 x 2032mm high	6
<b><u>1,6mm Double rebated frames suitable for one brick walls:</u></b>		
3	Frame for door size 813 x 2032mm high	2
<b><u>STEEL WINDOWS, DOORS, ETC</u></b>		
<b><u>Standard windows:</u></b>		
4	Window type NE1, 533 x 654mm high (N1)	7
5	Window type NE7, 1022 x 654mm high (N2)	4
<b>Carried Forward to Summary of Section No. 4</b>		
Section No. 4		
SF6 + SD1 Female and Educators Ablutions		
Bill No. 8		
METALWORK		
<b>Construction of Water, Sanitation and Fencing</b>		
<b>Fofza Primary School</b>		
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Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 4</u></b></p>			
<p><b><u>BILL NO.9</u></b></p>			
<p><b><u>PLASTERING</u></b></p> <p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Moisture tests:</u></b></p>			
<p>Before any finishes, coverings, etc are applied to screeds, plastering, etc or any other in-situ finish, moisture tests are to be carried out to the complete satisfaction of the Project Manager to ensure that these surfaces have the correct moisture content for the finish to be applied</p>			
<p><b><u>Labours, etc</u></b></p>			
<p>Labours such as fair, rounded and chamfered edges, trowel cuts, throats, V-joints, angles, etc shall be deemed to be included in the descriptions</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 4 SF6 + SD1 Female and Educators Ablutions Bill No. 9 PLASTERING <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

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R

**Sample Panels**

A sample panel size 1m x1m, of each of the various plaster type wall and floor finishes in this contract, shall be prepared for the approval of the Project Manager and the cost of the sample panel(s) shall be deemed to be included in the overall costs of the relevant wall and floor finishes

**GRANOLITHIC****Method:**

The method to be used shall be either the monolithic method or the bonded method

**Preparation:**

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

**Mix:**

Unless otherwise described, granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SANS 1083 and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the size of the coarse aggregate shall be increased to the maximum size compatible with the thickness of the granolithic

**Carried Forward**

R

Section No. 4  
SF6 + SD1 Female and Educators Ablutions  
Bill No. 9  
PLASTERING  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

**Brought Forward**

R

**Panels:**

Granolithic shall be laid in panels not exceeding 14m<sup>2</sup> for monolithic finishes, not exceeding 9,5m<sup>2</sup> for bonded finishes and not exceeding 6m<sup>2</sup> for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1,5 times its width

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

**Laying:**

Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels

Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels

After wood floating, the monolithic and bonded granolithic shall remain undisturbed until bleeding has ceased and the surface has stiffened. Any remaining bleed water and laitance shall then be removed and the surface steel trowelled or power floated

**Curing, seasoning and protection:**

Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying

**Colour:**

Coloured granolithic shall be tinted with an approved colouring pigment mixed into a true and even colour

**Carried Forward**

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Section No. 4  
SF6 + SD1 Female and Educators Ablutions  
Bill No. 9  
PLASTERING  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

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**TINTED WHITE CEMENT SCREEDS**

Tinted screed shall be composed of one bag White Portland Cement and two wheelbarrows "Malmesbury" sand. Surfaces shall be finished with a steel trowel to leave a smooth finish and coated with two coats "Earthcote S.I. Floorcote" two-pack polyurethane floor sealer applied as per the manufacturer's recommendations

NOTE: Tinted screeds are to be strengthened with "Primal Eccos" acrylic polymer (15% of the water volume is to be substituted with the acrylic polymer during the mixing process)

Coarse sand is to be used for these screeds

All tinting, finishing, strengthening, etc are to be mixed, applied, etc strictly in accordance with the manufacturer's instructions

**CEMENT PLASTER**

Unless otherwise described, cement plaster shall be taken to mean Class 1 cement plaster i.e. 1:4 cement:sand plaster (common cement)

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**GRANOLITHIC**

**Untinted granolithic, on concrete:**

1	30mm Thick on floors and landings	m2	28
2	Skirtings 150mm high	m	63

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

R

Section No. 4  
SF6 + SD1 Female and Educators Ablutions  
Bill No. 9  
PLASTERING  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 4</u></b></p>			
<p><b><u>BILL NO.10</u></b></p>			
<p><b><u>PLUMBING AND DRAINAGE (PROVISIONAL)</u></b></p>			
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<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
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<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Wire gratings:</u></b></p>			
<p>Descriptions of gutter outlets, etc shall be deemed to include wire balloon gratings</p>			
<p><b><u>Stormwater channels:</u></b></p>			
<p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc and disposal of surplus material on site</p>			
<p><b><u>French drains:</u></b></p>			
<p>Descriptions of french drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, approved geofabric filter blanket over stone, 300mm earthfilling over and disposal of surplus material on site</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 4 SF6 + SD1 Female and Educators Ablutions Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Septic tanks:**

Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site

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

Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)

Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)

Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)

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

**Sealing of edges:**

Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved mildew resistant silicone sealant and prices must include therefor

**uPVC pipes and fittings:**

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

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

**Carried Forward**

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Section No. 4  
 SF6 + SD1 Female and Educators Ablutions  
 Bill No. 10  
 PLUMBING AND DRAINAGE  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

**Brought Forward**

R

**uPVC pressure pipes and fittings:**

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

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

**High density polyethylene (HDPE) pipes and fittings:**

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

**"Polycop" polypropylene pipes:**

Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings

Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions

**Copper pipes:**

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

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

**Carried Forward**

R

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R

**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 claims for extra bushes, reducers, etc will be entertained

**Fixing of pipes:**

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

**Paper wrapping to pipes:**

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

**Disinfection of water pipework:**

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

**"Densyl" petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd.:**

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with suitable overlaps

Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, "Layflat" sheeting, securing of same, etc

Prices for wrapping of pipes shall include for all work as described to couplings in the length

**Carried Forward**

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PLUMBING AND DRAINAGE  
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**Laying, backfilling, bedding, etc of pipes:**

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

Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following:

- SANS 1200L : Medium-pressure pipelines
- SANS 1200LD : Sewers
- SANS 1200LE : Stormwater drainage

Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200DB : Earthworks (Pipe trenches)

Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200LB : Bedding (Pipes)

Unless otherwise described, bedding of rigid pipes shall be Class B bedding

**General:**

Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc are given separately)

Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 98% Mod AASHTO density and disposal of surplus material on site

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

**Carried Forward**

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Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured) and shall have straight or side outlets and "P" or "S" traps as necessary

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

**As-built drawings:**

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

**Proprietary items:**

Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items

Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.

Prices are to be based on the specific products/articles specified.

On request, returnable samples are to be provided to the Project Manager for consideration

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**RAINWATER DISPOSAL**

**0,6mm Galvanised sheet steel gutters and rainwater pipes with powder coated finish on outside to match roof sheeting colour:**

1	150 x150mm Box gutters	m	9
2	100 x 75mm Rainwater pipes	m	5
3	Extra over gutter for stopped end	No	2

**Carried Forward**

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<b>Brought Forward</b>			R
4	Extra over gutter for outlet for 100 x 75mm pipe	No	2
5	Extra over rainwater pipe for bend	No	2
6	Extra over rainwater pipe for shoe	No	2
7	Extra over rainwater pipe for eaves or plinth offset	No	2
<b>Carried Forward</b>			R
Section No. 4 SF6 + SD1 Female and Educators Ablutions Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b>			

<b>Brought Forward</b>			R
<b><u>SANITARY FITTINGS</u></b>			
<b><u>"Vaal" or similar approved:</u></b>			
8	455 x 290mm "Hibiscus" 7050 wash hand basin bolted to wall	No	1
9	"Daisy Elite" 772403 close-coupled WC suite comprising pan with double flap heavy duty thermoset seat (Code: 8531Z0) and matching 9 litre cistern	No	6
10	"Pearl Paraplegic" 7300SC paraplegic WC suite with lid, fittings, purpose made CP side flush lever and purpose made double flap white epoxy painted wooden seat	No	1
<b><u>Precast concrete wash trough:</u></b>			
11	Standard SABS approved Pre-Cast Concrete Double Wash Trough, 1080 x 650 x 850mm high with support legs fitted with standard 3/4 Brass Garden Taps, including all necessary pipework including soak away approximately 10 meters away from the wash trough, sized at 1000 x 1000 x 1000mm covered with "bidim" complete etc	No	2
<b><u>TRAPS, ETC</u></b>			
<b><u>uPVC:</u></b>			
12	40 x 40mm Double bowl wash trough or sink reseal "P" or "S" trap combination	No	2
<b><u>"Cobra Watertech" or similar approved:</u></b>			
13	50mm Code 365 CP bottle trap	No	1
<b><u>TAPS, VALVES, ETC</u></b>			
<b><u>"Cobra Watertech" or similar approved:</u></b>			
14	19mm chrome plated push button taps to wash troughs	No	2
15	15mm Code 232/350 FCP angle regulating valve and flexible connection pipe	No	12
<b>Carried Forward</b>			R
Section No. 4			
SF6 + SD1 Female and Educators Ablutions			
Bill No. 10			
PLUMBING AND DRAINAGE			
<b>Construction of Water, Sanitation and Fencing</b>			
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Brought Forward			R
16	15mm Code 503-21CP elbow action pillar tap	No	1
<b><u>SANITARY PLUMBING</u></b>			
<b><u>uPVC pipes:</u></b>			
17	50mm Pipes	m	15
18	110mm Pipes	m	35
19	50mm Diameter pipe laid in and including trenches not exceeding 1m deep	m	20
20	Ditto, but 110mm diameter	m	46
<b><u>Extra over uPVC pipes for fittings:</u></b>			
21	50mm Bend	No	6
22	50mm Junction	No	6
23	50mm Junction with cleaning eye and lid	No	6
24	110mm Straight pan connector	No	7
25	110mm Bend	No	14
26	110mm Junction	No	14
27	110mm Reducing junction	No	21
28	110mm Access bend	No	7
29	110mm Double junction	No	21
30	110mm "GI Two-way" vent valve	No	7
<b><u>Testing:</u></b>			
31	Testing waste pipe system		Item
<b><u>WATER SUPPLIES</u></b>			
Carried Forward			R
Section No. 4 SF6 + SD1 Female and Educators Ablutions Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

Brought Forward			R
<b><u>Class 1 copper pipes with capillary couplings:</u></b>			
32	15mm Pipe fixed to walls, in chases, etc	m	30
33	Ditto, but 22mm diameter	m	50
<b><u>Extra over Class 1 copper pipes for capillary fittings:</u></b>			
34	15mm Fittings	No	50
35	22mm Fittings	No	50
<b><u>Testing:</u></b>			
36	Testing water pipe system		Item
<b>Carried Forward to Summary of Section No. 4</b>			R
Section No. 4			
SF6 + SD1 Female and Educators Ablutions			
Bill No. 10			
PLUMBING AND DRAINAGE			
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Item No	<b><u>SECTION NO. 4</u></b>	Quantity	Rate	Amount
	<b><u>BILL NO.11</u></b>			
	<b><u>GLAZING</u></b>			
	-----			
	<b><u>PREAMBLES</u></b>			
	<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	<b><u>Float glass:</u></b>			
	<p>The term "float glass" is used for monolithic annealed glass</p>			
	<b><u>Laminated glass:</u></b>			
	<p>Laminated glass to have polyvinyl butyral (PVB) interlayer(s)</p>			
	-----			
	<b><u>GLAZING TO STEEL WITH PUTTY</u></b>			
	<b><u>6,38mm Obscure safety glass:</u></b>			
1	Panes not exceeding 0,1m <sup>2</sup>	m2	5	
	<b>Carried Forward to Summary of Section No. 4</b>			R
	<p>Section No. 4            SF6 + SD1 Female and Educators Ablutions            Bill No. 11            GLAZING  <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b></p>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 4</u></b></p>			
<p><b><u>BILL NO.12</u></b></p>			
<p><b><u>PAINTWORK</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>PREPARATORY WORK TO EXISTING WORK</u></b></p>			
<p><b><u>Previously painted plastered surfaces:</u></b></p> <p>Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and minor cracks shall be opened, filled with a suitable filler and finished smooth</p>			
<p><b><u>Previously painted metal surfaces:</u></b></p> <p>Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 4            SF6 + SD1 Female and Educators Ablutions            Bill No. 12            PAINTWORK  <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Previously painted wood surfaces:**

Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth

**PAINT SPECIFICATIONS**

All painting shall be done in accordance with "Plascon", etc specifications, unless otherwise described

**COLOURS**

When staining timber, the resultant colour or shade must be to the complete satisfaction of the Project Manager before any overcoating or preservative is applied

Paintwork is classified in the following different colour groups: "White", "Pastel", "Deep" and "Transparent" in accordance with the "Natural Colour System" (NCS) adopted by the SA National Standards  
Unless otherwise described, all paintwork shall be deemed to be classified in the "White" colour group

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**PAINTWORK, ETC TO NEW WORK**

**ON FIBRE-CEMENT BOARD SURFACES**

**One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use, on:**

1	Fascias and barge boards, including priming metal jointing strips	m2	5
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**METAL SURFACES WITH**

**One coat alkyd based zinc phosphate primer and two coats premium quality polyurethane enamel paint, on steel:**

2	Door frames	m2	15
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**Carried Forward**

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Section No. 4  
SF6 + SD1 Female and Educators Ablutions  
Bill No. 12  
PAINTWORK  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

<b>Brought Forward</b>			R
3	Windows	m2	10
4	Gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	7
5	Extra over for paintwork in the "Deep" colour group	m2	32
<b><u>ON WOOD SURFACES</u></b>			
<b><u>One coat primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on:</u></b>			
6	Doors	m2	29
7	Roof timbers at eaves and verges	m2	38
8	Extra over for paintwork in the "Deep" colour group	m2	67
<b>Carried Forward to Summary of Section No. 4</b>			R
Section No. 4			
SF6 + SD1 Female and Educators Ablutions			
Bill No. 12			
PAINTWORK			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofzo Primary School</b>			

Bill No	SECTION SUMMARY - SF6 + SD1 Female and Educators Ablutions	Page No	Amount
1	EARTHWORKS	93	
2	CONCRETE, FORMWORK AND REINFORCEMENT	97	
3	MASONRY	100	
4	WATERPROOFING	102	
5	ROOF COVERINGS	104	
6	CARPENTRY AND JOINERY	107	
7	IRONMONGERY	111	
8	METALWORK	114	
9	PLASTERING	118	
10	PLUMBING AND DRAINAGE	128	
11	GLAZING	129	
12	PAINTWORK	132	
<b>Carried to Final Summary</b>			R
Section No. 4 SF6 + SD1 Female and Educators Ablutions <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 5</u></b></p>			
<p><b><u>BILL NO.1</u></b></p>			
<p><b><u>EARTHWORKS (PROVISIONAL)</u></b></p> <p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Nature of ground</u></b></p>			
<p>The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "hard rock" or "soft rock".</p>			
<p>The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock".</p>			
<p>The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, therefore "earth", but possibly interspersed with "hard rock".</p>			
<p>Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth". The trial holes also indicate that the water table is at a maximum depth of approximately 1000mm.</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 5            F6 + SD1 Female Ablutions            Bill No. 1            EARTHWORKS  <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b></p>		R	

**Brought Forward**

A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured

**Subterranean water:**

No subterranean water is expected

Should the Contractor however, encounter any subterranean water on the site, he shall immediately notify the Principal Agent thereof and submit recommendations for keeping the works free from subterranean water together with all costs involved therewith

**Excavation for working space in rock:**

Notwithstanding clause 10 measurement rule 27 of the Standard System of Measuring Building Work, excavation for working space in material of a more different character (e.g. soft or hard rock) will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be

**Carting away of excavated material**

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

**Filling**

Notwithstanding the reference to prescribed multiple handling in clause 1 page 10 of the Standard System (7th Edition, 2015) of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material

**Carried Forward**

Section No. 5  
F6 + SD1 Female Ablutions  
Bill No. 1  
EARTHWORKS  
**Construction of Water, Sanitation and Fencing  
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**Brought Forward**

R

**Testing:**

*Prices for backfilling to trenches and holes only are to include for all necessary density tests in accordance with SANS 1200D*

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**EXCAVATIONS, FILLING, ETC**

**EXCAVATIONS, ETC**

**Excavation in earth not exceeding 2m deep:**

1	Reduced levels under floors	m3	4
2	Trenches	m3	10
3	Holes	m3	34
4	Trenches and holes for thickening under surface beds, etc	m3	3

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

5	Soft rock	m3	4
6	Hard rock	m3	2

**Extra over all excavations for carting away:**

7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	48
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**Risk of collapse of excavations:**

8	Sides of trench and hole excavations not exceeding 1,5m deep	m2	67
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**Keeping excavations free of water:**

9	Keeping excavations free of all water other than subterranean water		Item
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**FILLING ETC**

**Carried Forward**

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Section No. 5  
 F6 + SD1 Female Ablutions  
 Bill No. 1  
 EARTHWORKS  
**Construction of Water, Sanitation and Fencing  
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Brought Forward			R
<b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:</u></b>			
10	Backfilling to trenches, holes, etc	m3	3
<b><u>G5 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:</u></b>			
11	Under floors, steps, pavings, etc	m3	7
<b><u>Compaction of surfaces:</u></b>			
12	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 91% Mod AASHTO density	m2	20
<b><u>Prescribed density tests on filling:</u></b>			
13	"Modified AASHTO Density" test	No	16
<b><u>SOIL POISONING</u></b>			
<b><u>Soil insecticide in accordance with SANS 5859:</u></b>			
14	Soil insecticide (protection against termites) applied as specified under floors, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	48
15	To bottoms and sides of trenches, etc	m2	46
<b>Carried Forward to Summary of Section No. 5</b>			R
Section No. 5			
F6 + SD1 Female Ablutions			
Bill No. 1			
EARTHWORKS			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 5</u></b></p>			
<p><b><u>BILL NO.2</u></b></p>			
<p><b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b></p>			
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<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Cost of tests:</u></b></p>			
<p><b><u>Breeze concrete:</u></b></p>			
<p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated</p>			
<p><b><u>Lightweight concrete:</u></b></p>			
<p>Lightweight concrete shall have a density of 600kg/m<sup>3</sup> for the top 50mm and 400kg/m<sup>3</sup> for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 5 F6 + SD1 Female Ablutions Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

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**Waterproof concrete:**

"Waterproof concrete" shall have the same properties as normal concrete, but the following shall be modified to make the the concrete more water-tight:

1. a cement/water ratio of minimum 1.9 and maximum 2.1
2. minimum OPC content of 300kg/m<sup>3</sup>
3. Polypropylene micro fibres added to concrete at rate of 182 million per m<sup>3</sup>

**Formwork:**

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

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 soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described

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**UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**15MPa/19mm concrete:**

1	Surface blinding under footings and bases	m <sup>3</sup>	1
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**REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**Carried Forward**

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Section No. 5  
 F6 + SD1 Female Ablutions  
 Bill No. 2  
 CONCRETE, FORMWORK AND REINFORCEMENT  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Brought Forward			R
<b><u>30MPa/19mm concrete:</u></b>			
	Strip footings	m3	4
	Surface beds on waterproofing	m3	6
	Surface beds in tank bottoms	m3	3
<b><u>TEST BLOCKS</u></b>			
2	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	4
<b><u>CONCRETE SUNDRIES</u></b>			
<b><u>Finishing top surfaces of concrete smooth with a steel trowel:</u></b>			
3	Surface beds, slabs, etc	m2	48
<b><u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u></b>			
<b><u>Rough formwork to sides:</u></b>			
4	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	48
<b><u>MOVEMENT JOINTS, ETC</u></b>			
<b><u>Expansion joints with 10mm softboard between vertical concrete and brick surfaces:</u></b>			
5	Not exceeding 300mm high to edges of surface beds	m	63
<b><u>Saw-cut joints:</u></b>			
6	6 x 10mm Saw-cut joints in top of concrete	m	76
<b><u>REINFORCEMENT (PROVISIONAL)</u></b>			
<b><u>Mild steel reinforcement to structural concrete work:</u></b>			
7	Mild steel bar reinforcement (8 to 40mm diameter bars)	t	0.09
Carried Forward			R
Section No. 5 F6 + SD1 Female Ablutions Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT Construction of Water, Sanitation and Fencing Fofza Primary School			

<b>Brought Forward</b>			R
<b><u>High tensile steel reinforcement to structural concrete work:</u></b>			
8	High tensile steel bar reinforcement (8 to 40mm diameter bars)	t	0.22
<b><u>Fabric reinforcement:</u></b>			
9	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	48
<b>Carried Forward to Summary of Section No. 5</b>			R
Section No. 5 F6 + SD1 Female Ablutions Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 5</u></b></p> <p><b><u>BILL NO.3</u></b></p> <p><b><u>MASONRY</u></b></p> <p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>BRICKWORK</u></b></p> <p><b><u>General:</u></b></p> <p>Non-load bearing brickwork is to be built to full height less 20mm gap next to the ceiling and is to be left for 14 days before grouting up in 1:3 cement mortar.</p> <p><b><u>Sizes in descriptions:</u></b></p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p><b><u>Hollow walls:</u></b></p> <p>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</p>			
<p><b>Carried Forward</b></p>		R	
<p>Section No. 5            F6 + SD1 Female Ablutions            Bill No. 3            MASONRY  <b>Construction of Water, Sanitation and Fencing            Fofeza Primary School</b></p>			

<b>Brought Forward</b>			R
<b><u>Bagged and sealed walls:</u></b>			
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 bitumen emulsion waterproofing coating			
<b><u>Face bricks :</u></b>			
Bricks shall be ordered timeously to obtain uniformity in size and colour			
All face brickwork shall be regularly cleaned down as the work proceeds and shall be protected as necessary by an approved method			
<b><u>Pointing:</u></b>			
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include smooth floated square recessed, hollow recessed, weathered pointing, etc			
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<b><u>FOUNDATIONS (PROVISIONAL)</u></b>			
<b><u>Brickwork of NFP bricks (14 MPa nominal compressive strength) in class 1 mortar:</u></b>			
1	One brick walls	m2	39
<b><u>2,5mm Brickwork reinforcement:</u></b>			
2	150mm Wide reinforcement built in horizontally	m	99
<b><u>FACE BRICKWORK</u></b>			
<b><u>Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u></b>			
3	Extra over brickwork for face brickwork	m2	6
<b><u>SUPERSTRUCTURE</u></b>			
<b>Carried Forward</b>			R
Section No. 5 F6 + SD1 Female Ablutions Bill No. 3 MASONRY <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

Brought Forward			R
<b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar in loadbearing walls etc:</u></b>			
4	One brick walls	m2	67
<b><u>BRICKWORK SUNDRIES</u></b>			
<b><u>Joint forming material in movement joints:</u></b>			
5	12mm Fibre board built in vertically through brick walls	m	61
<b><u>2,5mm Brickwork reinforcement:</u></b>			
6	75mm Wide reinforcement built in horizontally	m	108
7	150mm Wide reinforcement built in horizontally	m	223
<b><u>Prestressed fabricated concrete lintels, including necessary temporary supports:</u></b>			
8	110 x 75mm Lintels in lengths not exceeding 3m long	m	40
<b><u>FACE BRICKWORK</u></b>			
<b><u>Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u></b>			
9	Half brick wall faced on both sides	m2	26
10	Extra over brickwork for face brickwork	m2	114
11	Extra over brickwork for brick-on-edge header course lintel pointed on face and 120mm soffit	m	9
12	Fair raking cutting	m	10
<b><u>Brick-on-edge header course coping, sills, etc. of face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with recessed joints on all exposed faces</u></b>			
13	150mm Wide sills set sloping and slightly projecting	m	8
<b>Carried Forward to Summary of Section No. 5</b>			R
Section No. 5			
F6 + SD1 Female Ablutions			
Bill No. 3			
MASONRY			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 5</u></b></p>			
<p><b><u>BILL NO.4</u></b></p>			
<p><b><u>WATERPROOFING</u></b></p>			
<p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Waterproofing:</u></b></p>			
<p>Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets, etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs</p>			
<p>-----</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 5 F6 + SD1 Female Ablutions Bill No. 4 WATERPROOFING <b>Construction of Water, Sanitation and Fencing Fofeza Primary School</b></p>			
		<p>R</p>	

Brought Forward

R

**DAMPPROOFING OF WALLS AND FLOORS**

**One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B):**

1	In walls	m2	289
2	In walls vertically at reveals	m2	4

**One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:**

3	Under surface beds	m2	34
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**JOINT SEALANTS ETC**

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

4	6 x 10mm In saw cut joints in floors	m	76
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**White silicone sealing compound including backing cord, bond breaker, primer, etc**

5	6 x 10mm In expansion joints in floors, including raking out expansion joint filler as necessary [ LI ]	m	63
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**Carried Forward to Summary of Section No. 5**

R

Section No. 5  
 F6 + SD1 Female Ablutions  
 Bill No. 4  
 WATERPROOFING  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 5</u></b></p>			
<p><b><u>BILL NO.5</u></b></p>			
<p><b><u>ROOF COVERINGS</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p>Profiled metal roof sheeting and accessories shall be supplied with a 10 year guarantee and be installed by an approved installer</p>			
<p>All fixing holes shall be drilled and not punched</p>			
<p>Roof covering accessories shall be manufactured from the same material as used for roof covering</p>			
<p>-----</p> <p><b><u>PROFILED METAL SHEETING AND ACCESSORIES</u></b></p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 5            F6 + SD1 Female Ablutions            Bill No. 5            ROOF COVERINGS  <b>Construction of Water, Sanitation and Fencing            Fofeza Primary School</b></p>		R	

Brought Forward			R
	<p><b><u>0,6 mm "Klip-Lok 406" or similar approved light industrial Z275 spelter galvanised steel sheeting, with "Classicoat" finish one side and half coat "Classicoat Grey" other side, and accessories fixed to timber purlins or rails at approximately 1500mm centres:</u></b></p>		
1	Roof coverings with pitch not exceeding 25 degrees	m2	45
	<p><b><u>Accessories:</u></b></p>		
2	Apex flashings 462mm girth	m	9
	<p><b><u>ROOF AND WALL INSULATION</u></b></p>		
	<p><b><u>"Sisalation 405" or similar approved residential grade aluminium foil based insulation:</u></b></p>		
3	Insulation sheeting laid taut over purlins at approximately 1000mm centres and fixed concurrent with roof covering with minimum 150mm stapled laps, including galvanised steel straining wires at not exceeding 400mm centres and double-sided tape at edges where required	m2	45
<p><b>Carried Forward to Summary of Section No. 5</b></p>			R
<p>Section No. 5                      F6 + SD1 Female Ablutions                      Bill No. 5                      ROOF COVERINGS  <b>Construction of Water, Sanitation and Fencing                      Fofza Primary School</b></p>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 5</u></b></p>			
<p><b><u>BILL NO.6</u></b></p>			
<p><b><u>CARPENTRY AND JOINERY</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Fixing:</u></b></p>			
<p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete</p>			
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given separately elsewhere</p>			
<p><b><u>Joinery:</u></b></p>			
<p>Descriptions of frames shall be deemed to include frames, transoms, rails, etc</p>			
<p>Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 5 F6 + SD1 Female Ablutions Bill No. 6 CARPENTRY AND JOINERY <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>			
		R	

**Brought Forward**

R

**Particle board**

All particle board shall comply with SANS 50312 having the required marking as per SANS 50312/EN 312

**Decorative thermosetting plastic laminate covering:**

Laminate covering shall be glued under pressure and edge strips of same shall be butt jointed at junctions with adjacent similar finish

**Sizes:**

Sizes are nominal and the Contractor shall make allowance in his prices for minor variances in stated finished sizes of timber doors, door members, door frames, architraves, etc

**Prices**

Prices for all joinery work are to include for general framing, housing and notching, arris rounded angles, glueing, blocking, planting on, screwing, adhesives, dowels, pellets, cross tongues, screws and nails and setting up complete and also for all square cutting and waste. Tops shall be secured with metal or hardwood buttons.

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**ROOFS, ETC**

**Sawn softwood grade 5:**

1	38 x 114mm Wall plates bolted	m	18
2	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	58
3	50 x 76mm Purlins	m	60

**EAVES, VERGES, ETC**

**Carried Forward**

R

Section No. 5  
 F6 + SD1 Female Ablutions  
 Bill No. 6  
 CARPENTRY AND JOINERY  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

<b>Brought Forward</b>		R
<b><u>Medium density plain fibre-cement fascias and barge boards:</u></b>		
4	19 x 235mm Fascias and barge boards, including aluminium H-profile jointing strips	19
	m	
<b><u>DOORS, ETC</u></b>		
<b><u>Wrought meranti doors hung to steel frames:</u></b>		
5	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding including 150mm undercut (D2)	6
	No	
6	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	2
	No	
<b>Carried Forward to Summary of Section No. 5</b>		
Section No. 5		
F6 + SD1 Female Ablutions		
Bill No. 6		
CARPENTRY AND JOINERY		
<b>Construction of Water, Sanitation and Fencing</b>		
<b>Fofoza Primary School</b>		
		R

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 5</u></b></p>			
<p><b><u>BILL NO.7</u></b></p>			
<p><b><u>IRONMONGERY</u></b></p>			
<p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Proprietary items:</u></b></p>			
<p>Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items</p>			
<p>Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.</p>			
<p>Prices are to be based on the specific products/articles specified.</p>			
<p>On request, returnable samples are to be provided to the Project Manager for consideration</p>			
<p><b><u>Locks:</u></b></p>			
<p>Notwithstanding Clause 2, Item 3 of the "Ironmongery" trade of the Standard System (7th Edition, 2015) of Measuring Building Wor, descriptions of locks shall be deemed to include two keys per lock</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 5 F6 + SD1 Female Ablutions Bill No. 7 IRONMONGERY <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Finishes to ironmongery:**

Where applicable, finishes to ironmongery are indicated by suffixes in accordance with the following list:

- BS Satin bronze lacquered
- CH Chromium plated
- SC Satin chromium plated
- SE Silver enamelled
- GE Grey enamelled
- AN Anodised natural
- AS Anodised silver
- AB Anodised bronze
- AG Anodised gold
- ABL Anodised black
- PB Polished brass
- PL Polished and lacquered
- PT Epoxy coated
- SD Sanded
- BBS Brushed stainless steel

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**CATCHES, CABIN HOOKS, ETC**

1	150mm Cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	6
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**LOCKS**

**"Union Assa Abloy" or similar approved:**

2	50mm Brass padlock	No	2
3	Four lever lockset	No	2
4	"Ref. CZ80941SC" Indicator bolt	No	6

**HANDLES**

**"Union Assa Abloy" or similar approved:**

5	ASSA ABLOY Anodised Silver straight pull handle (Code: AL5515-300BBAS) with 300mm fixing centres	Pairs	2.0
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**Carried Forward**

R

Section No. 5  
 F6 + SD1 Female Ablutions  
 Bill No. 7  
 IRONMONGERY  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Brought Forward

R

**PUSH PLATES AND KICK PLATES**

**"Union Assa Abloy" or similar approved:**

**1.2mm Thick satin finished "Union" stainless steel plates countersunk screwed along edges at not exceeding 200mm centres**

6	200 x 800mm Type "SS5089-200W" kicking plate	No	16
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**LETTERS, NAMEPLATES, ETC**

**"Dorma" or similar approved:**

7	DSS-131 Engraved "Female" information sign, plugged	No	2
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**SUNDRIES**

8	25mm Diameter wall mounted door stop plugged	No	8
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**BATHROOM FITTINGS**

**"Kimberley-Clark" or similar approved:**

9	"Ref. SQ2 code 405607B" white lockable toilet roll holder	No	7
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10	Brushed stainless steel body, rust resistant, she bin, approximately 330 x 280 x 180mm etc	No	7
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**Carried Forward to Summary of Section No. 5**

R

Section No. 5  
 F6 + SD1 Female Ablutions  
 Bill No. 7  
 IRONMONGERY  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 5</u></b></p>			
<p><b><u>BILL NO.8</u></b></p>			
<p><b><u>METALWORK</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Descriptions of bolts, anchors, etc:</u></b></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>Items described as "holed for bolt(s)" shall be deemed to exclude the bolts, unless otherwise described</p>			
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 5 F6 + SD1 Female Ablutions Bill No. 8 METALWORK <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>			R

**Brought Forward**

R

**Fixing:**

Unless otherwise described, descriptions of items shall be deemed to include for fixing to brickwork or concrete

Where items are described as "bolted", the bolts are measured elsewhere as stated in clause N.7 of the Model Preambles

**References:**

References in descriptions of windows, doors, gates, etc refer to the respective types of windows, doors, etc detailed in the Architect's window schedules numbered

- 21111/FSPS/S005
- T-2003
- T-2004
- T-2005

and bound into the back of these bills of quantities

Tenderers are to price the following items in conjunction with the above Architect's drawings, etc and no claim arising from brevity of descriptions in these bills of quantities, of items shown on the Architect's drawings, etc shall be entertained

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**Carried Forward**

R

Section No. 5  
 F6 + SD1 Female Ablutions  
 Bill No. 8  
 METALWORK  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

<b>Brought Forward</b>		R
<b><u>STEEL GATES, SCREENS, ETC</u></b>		
<b><u>Welded screens and gates, to brickwalls:</u></b>		
1	Single gate and frame size to fit standard door, size 813 x 2032mm high	No 2
<b><u>PRESSED STEEL DOOR FRAMES</u></b>		
<b><u>1,6mm Double rebated frames suitable for half brick walls:</u></b>		
2	Frame for door size 813 x 2032mm high	No 6
<b><u>1,6mm Double rebated frames suitable for one brick walls:</u></b>		
3	Frame for door size 813 x 2032mm high	No 2
<b><u>STEEL WINDOWS, DOORS, ETC</u></b>		
<b><u>Standard windows:</u></b>		
4	Window type NE1, 533 x 654mm high (N1)	No 7
5	Window type NE7, 1022 x 654mm high (N2)	No 4
<b>Carried Forward to Summary of Section No. 5</b>		
Section No. 5		
F6 + SD1 Female Ablutions		
Bill No. 8		
METALWORK		
<b>Construction of Water, Sanitation and Fencing</b>		
<b>Fofza Primary School</b>		
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Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 5</u></b></p>			
<p><b><u>BILL NO.9</u></b></p>			
<p><b><u>PLASTERING</u></b></p> <p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Moisture tests:</u></b></p>			
<p>Before any finishes, coverings, etc are applied to screeds, plastering, etc or any other in-situ finish, moisture tests are to be carried out to the complete satisfaction of the Project Manager to ensure that these surfaces have the correct moisture content for the finish to be applied</p>			
<p><b><u>Labours, etc</u></b></p>			
<p>Labours such as fair, rounded and chamfered edges, trowel cuts, throats, V-joints, angles, etc shall be deemed to be included in the descriptions</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 5 F6 + SD1 Female Ablutions Bill No. 9 PLASTERING <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Sample Panels**

A sample panel size 1m x1m, of each of the various plaster type wall and floor finishes in this contract, shall be prepared for the approval of the Project Manager and the cost of the sample panel(s) shall be deemed to be included in the overall costs of the relevant wall and floor finishes

**GRANOLITHIC****Method:**

The method to be used shall be either the monolithic method or the bonded method

**Preparation:**

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

**Mix:**

Unless otherwise described, granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SANS 1083 and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the size of the coarse aggregate shall be increased to the maximum size compatible with the thickness of the granolithic

**Carried Forward**

R

Section No. 5  
F6 + SD1 Female Ablutions  
Bill No. 9  
PLASTERING  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

**Brought Forward**

R

**Panels:**

Granolithic shall be laid in panels not exceeding 14m<sup>2</sup> for monolithic finishes, not exceeding 9,5m<sup>2</sup> for bonded finishes and not exceeding 6m<sup>2</sup> for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1,5 times its width

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

**Laying:**

Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels

Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels

After wood floating, the monolithic and bonded granolithic shall remain undisturbed until bleeding has ceased and the surface has stiffened. Any remaining bleed water and laitance shall then be removed and the surface steel trowelled or power floated

**Curing, seasoning and protection:**

Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying

**Colour:**

Coloured granolithic shall be tinted with an approved colouring pigment mixed into a true and even colour

**Carried Forward**

R

Section No. 5  
F6 + SD1 Female Ablutions  
Bill No. 9  
PLASTERING  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

**Brought Forward**

R

**TINTED WHITE CEMENT SCREEDS**

Tinted screed shall be composed of one bag White Portland Cement and two wheelbarrows "Malmesbury" sand. Surfaces shall be finished with a steel trowel to leave a smooth finish and coated with two coats "Earthcote S.I. Floorcote" two-pack polyurethane floor sealer applied as per the manufacturer's recommendations

NOTE: Tinted screeds are to be strengthened with "Primal Eccos" acrylic polymer (15% of the water volume is to be substituted with the acrylic polymer during the mixing process)

Coarse sand is to be used for these screeds

All tinting, finishing, strengthening, etc are to be mixed, applied, etc strictly in accordance with the manufacturer's instructions

**CEMENT PLASTER**

Unless otherwise described, cement plaster shall be taken to mean Class 1 cement plaster i.e. 1:4 cement:sand plaster (common cement)

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**GRANOLITHIC**

**Untinted granolithic, on concrete:**

1	30mm Thick on floors and landings	m2	28
2	Skirtings 150mm high	m	63

**SPECIAL FLOOR COATING**

**Prepare all surfaces as necessary, prime with "Flowprime" primer and apply 6mm thick anti-slip "Flowcrete Flowfresh HF" or similar approved heavy duty chemical resistant antimicrobial treated polyurethane resin floor screed of approved colour and applied by an approved specialist, on:**

3	On internal plastered walls	m2	49
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**Carried Forward**

R

Section No. 5  
 F6 + SD1 Female Ablutions  
 Bill No. 9  
 PLASTERING  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Brought Forward

R

**INTERNAL PLASTER**

**Cement plaster steel trowelled, on brickwork:**

4	On walls	m2	29	
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**Carried Forward to Summary of Section No. 5**

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Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 5</u></b></p>			
<p><b><u>BILL NO.10</u></b></p>			
<p><b><u>PLUMBING AND DRAINAGE</u></b> <b><u>(PROVISIONAL)</u></b></p>			
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<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Wire gratings:</u></b></p>			
<p>Descriptions of gutter outlets, etc shall be deemed to include wire balloon gratings</p>			
<p><b><u>Stormwater channels:</u></b></p>			
<p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc and disposal of surplus material on site</p>			
<p><b><u>French drains:</u></b></p>			
<p>Descriptions of french drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, approved geofabric filter blanket over stone, 300mm earthfilling over and disposal of surplus material on site</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 5 F6 + SD1 Female Ablutions Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>			
		R	

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**Septic tanks:**

Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site

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

Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)

Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)

Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)

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

**Sealing of edges:**

Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved mildew resistant silicone sealant and prices must include therefor

**uPVC pipes and fittings:**

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

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

**Carried Forward**

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 Bill No. 10  
 PLUMBING AND DRAINAGE  
**Construction of Water, Sanitation and Fencing  
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**uPVC pressure pipes and fittings:**

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

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

**High density polyethylene (HDPE) pipes and fittings:**

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

**"Polycop" polypropylene pipes:**

Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings

Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions

**Copper pipes:**

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

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

**Carried Forward**

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PLUMBING AND DRAINAGE

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**Reducing fittings:**

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm, only the largest end or branch 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 claims for extra bushes, reducers, etc will be entertained

**Fixing of pipes:**

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

**Paper wrapping to pipes:**

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

**Disinfection of water pipework:**

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

**"Densyl" petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd.:**

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with suitable overlaps

Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, "Layflat" sheeting, securing of same, etc

Prices for wrapping of pipes shall include for all work as described to couplings in the length

**Carried Forward**

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**Construction of Water, Sanitation and Fencing  
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**Laying, backfilling, bedding, etc of pipes:**

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

Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following:

SANS 1200L : Medium-pressure pipelines

SANS 1200LD : Sewers

SANS 1200LE : Stormwater drainage

Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200DB : Earthworks (Pipe trenches)

Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200LB : Bedding (Pipes)

Unless otherwise described, bedding of rigid pipes shall be Class B bedding

**General:**

Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc are given separately)

Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 98% Mod AASHTO density and disposal of surplus material on site

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

**Carried Forward**

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**Construction of Water, Sanitation and Fencing**

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Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured) and shall have straight or side outlets and "P" or "S" traps as necessary

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

**As-built drawings:**

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

**Proprietary items:**

Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items

Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.

Prices are to be based on the specific products/articles specified.

On request, returnable samples are to be provided to the Project Manager for consideration

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**RAINWATER DISPOSAL**

**0,6mm Galvanised sheet steel gutters and rainwater pipes with powder coated finish on outside to match roof sheeting colour:**

1	150 x150mm Box gutters	m	9
2	100 x 75mm Rainwater pipes	m	5
3	Extra over gutter for stopped end	No	2

**Carried Forward**

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 F6 + SD1 Female Ablutions  
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 PLUMBING AND DRAINAGE  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

<b>Brought Forward</b>			R
4	Extra over gutter for outlet for 100 x 75mm pipe	No	2
5	Extra over rainwater pipe for bend	No	2
6	Extra over rainwater pipe for shoe	No	2
7	Extra over rainwater pipe for eaves or plinth offset	No	2
<b>Carried Forward</b>			R
Section No. 5 F6 + SD1 Female Ablutions Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b>			

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**SANITARY FITTINGS**

**Supply and install "Enviroloo systems" or similar approved:**

8 "Enviro Loo System FG-1040 STDCA/A Standard" strictly in accordance with manufacturers instructions, unit comprising of top unit and two x louvered inlets (PL.1), drying plate (PL.2), two x air inlets (PL.3), toilet pan, seat and lid (PL.4), 3500mm long outlet vent pipe (PL.5), ventilation extraction unit (PL.6) fixed to wall with vent wall bracket (PL.7), 1 bag mounting screws and organic starter, enzyme and toilet cleaner (PL.8) including all necessary interconnector piping between multiple tanks, emergency outlet piping, etc

No

7

**Precast concrete wash trough:**

9 Standard SABS approved Pre-Cast Concrete Double Wash Trough, 1080 x 650 x 850mm high with support legs fitted with standard 3/4 Brass Garden Taps, including all necessary pipework including soak away approximately 10 meters away from the wash trough, sized at 1000 x 1000 x 1000mm covered with "bidim" complete etc

No

2

**BUDGETARY ALLOWANCES**

**SUPERVISION OF INSTALLATION OF "ENVIRO LOO":**

10 Two site visits to be made by the "enviroo loo" suppliers to assist/support the contractor in the installation of the "enviro loo" and a final inspection to be ascertain the enviro loo has been installed correctly at which time a Certificate of Compliance should be issued between Mvula Trust and Enviro Loo Options Limpopo.

Item

11 Profit and attendance for the above

Item

**TRAPS, ETC**

Carried Forward

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Section No. 5  
 F6 + SD1 Female Ablutions  
 Bill No. 10  
 PLUMBING AND DRAINAGE  
**Construction of Water, Sanitation and Fencing  
 Fofeza Primary School**

Brought Forward			R
<b><u>uPVC:</u></b>			
12	40 x 40mm Double bowl wash trough or sink reseal "P" or "S" trap combination	No	2
<b><u>TAPS, VALVES, ETC</u></b>			
<b><u>"Cobra Watertech" or similar approved:</u></b>			
13	19mm chrome plated push button taps to wash troughs	No	4
14	15mm Code 232/350 FCP angle regulating valve and flexible connection pipe	No	4
<b><u>SANITARY PLUMBING</u></b>			
<b><u>uPVC pipes:</u></b>			
15	50mm Pipes	m	4
16	50mm Diameter pipe laid in and including trenches not exceeding 1m deep	m	4
<b><u>Extra over uPVC pipes for fittings:</u></b>			
17	50mm Bend	No	2
18	50mm Junction	No	2
19	110mm Bend	No	2
20	110mm Junction	No	2
<b><u>WATER SUPPLIES</u></b>			
<b><u>Class 1 copper pipes with capillary couplings:</u></b>			
21	15mm Pipe fixed to walls, in chases, etc	m	10
22	Ditto, but 22mm diameter	m	20
Carried Forward			R
Section No. 5 F6 + SD1 Female Ablutions Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

**Brought Forward**

R

**Extra over Class 1 copper pipes for capillary fittings:**

23	15mm Fittings	No	4
24	22mm Fittings	No	4

**Carried Forward to Summary of Section No. 5**

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 F6 + SD1 Female Ablutions  
 Bill No. 10  
 PLUMBING AND DRAINAGE  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Item No	<b><u>SECTION NO. 5</u></b>	Quantity	Rate	Amount
	<b><u>BILL NO.11</u></b>			
	<b><u>GLAZING</u></b>			
	-----			
	<b><u>PREAMBLES</u></b>			
	<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	<b><u>Float glass:</u></b>			
	<p>The term "float glass" is used for monolithic annealed glass</p>			
	<b><u>Laminated glass:</u></b>			
	<p>Laminated glass to have polyvinyl butyral (PVB) interlayer(s)</p>			
	-----			
	<b><u>GLAZING TO STEEL WITH PUTTY</u></b>			
	<b><u>6,38mm Obscure safety glass:</u></b>			
1	Panes not exceeding 0,1m <sup>2</sup>	m2	10	
	<b>Carried Forward to Summary of Section No. 5</b>			R
	<p>Section No. 5                      F6 + SD1 Female Ablutions                      Bill No. 11                      GLAZING  <b>Construction of Water, Sanitation and Fencing                      Fofeza Primary School</b></p>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 5</u></b></p>			
<p><b><u>BILL NO.12</u></b></p>			
<p><b><u>PAINTWORK</u></b></p>			
<p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
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<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>PREPARATORY WORK TO EXISTING WORK</u></b></p>			
<p><b><u>Previously painted plastered surfaces:</u></b></p>			
<p>Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and minor cracks shall be opened, filled with a suitable filler and finished smooth</p>			
<p><b><u>Previously painted metal surfaces:</u></b></p>			
<p>Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 5 F6 + SD1 Female Ablutions Bill No. 12 PAINTWORK <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Previously painted wood surfaces:**

Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth

**PAINT SPECIFICATIONS**

All painting shall be done in accordance with "Plascon", etc specifications, unless otherwise described

**COLOURS**

When staining timber, the resultant colour or shade must be to the complete satisfaction of the Project Manager before any overcoating or preservative is applied

Paintwork is classified in the following different colour groups: "White", "Pastel", "Deep" and "Transparent" in accordance with the "Natural Colour System" (NCS) adopted by the SA National Standards  
Unless otherwise described, all paintwork shall be deemed to be classified in the "White" colour group

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**PAINTWORK, ETC TO NEW WORK**

**ON FIBRE-CEMENT BOARD SURFACES**

**One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use, on:**

1	Fascias and barge boards, including priming metal jointing strips	m2	5
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**METAL SURFACES WITH**

**One coat alkyd based zinc phosphate primer and two coats premium quality polyurethane enamel paint, on steel:**

2	Door frames	m2	15
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**Carried Forward**

R

Section No. 5  
F6 + SD1 Female Ablutions  
Bill No. 12  
PAINTWORK  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

<b>Brought Forward</b>			R
3	Windows	m2	10
4	Gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	7
5	Extra over for paintwork in the "Deep" colour group	m2	32
<b><u>ON WOOD SURFACES</u></b>			
<b><u>One coat primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on:</u></b>			
6	Doors	m2	29
7	Roof timbers at eaves and verges	m2	38
8	Extra over for paintwork in the "Deep" colour group	m2	67
<b>Carried Forward to Summary of Section No. 5</b>			R
Section No. 5			
F6 + SD1 Female Ablutions			
Bill No. 12			
PAINTWORK			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofzo Primary School</b>			

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1	EARTHWORKS	137	
2	CONCRETE, FORMWORK AND REINFORCEMENT	141	
3	MASONRY	144	
4	WATERPROOFING	146	
5	ROOF COVERINGS	148	
6	CARPENTRY AND JOINERY	151	
7	IRONMONGERY	154	
8	METALWORK	157	
9	PLASTERING	162	
10	PLUMBING AND DRAINAGE	172	
11	GLAZING	173	
12	PAINTWORK	176	
<b>Carried to Final Summary</b>			
Section No. 5 F6 + SD1 Female Ablutions <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b>			R

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 6</u></b></p>			
<p><b><u>BILL NO.1</u></b></p>			
<p><b><u>EARTHWORKS (PROVISIONAL)</u></b></p> <p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
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<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Nature of ground</u></b></p>			
<p>The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "hard rock" or "soft rock".</p>			
<p>The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock".</p>			
<p>The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, therefore "earth", but possibly interspersed with "hard rock".</p>			
<p>Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth". The trial holes also indicate that the water table is at a maximum depth of approximately 1000mm.</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 1 EARTHWORKS <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured

**Subterranean water:**

No subterranean water is expected

Should the Contractor however, encounter any subterranean water on the site, he shall immediately notify the Principal Agent thereof and submit recommendations for keeping the works free from subterranean water together with all costs involved therewith

**Excavation for working space in rock:**

Notwithstanding clause 10 measurement rule 27 of the Standard System of Measuring Building Work, excavation for working space in material of a more different character (e.g. soft or hard rock) will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be

**Carting away of excavated material**

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

**Filling**

Notwithstanding the reference to prescribed multiple handling in clause 1 page 10 of the Standard System (7th Edition, 2015) of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material

**Carried Forward**

Section No. 6  
SM3 + 3UR Male and Educators Ablutions  
Bill No. 1  
EARTHWORKS  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

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R

**Brought Forward**

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**Testing:**

*Prices for backfilling to trenches and holes only are to include for all necessary density tests in accordance with SANS 1200D*

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**EXCAVATIONS, FILLING, ETC**

**EXCAVATIONS, ETC**

**Excavation in earth not exceeding 2m deep:**

1	Reduced levels under floors	m3	2
2	Trenches	m3	8
3	Trenches and holes for thickening under surface beds, etc	m3	1

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

4	Soft rock	m3	1
5	Hard rock	m3	0.4

**Extra over all excavations for carting away:**

6	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	9
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**Risk of collapse of excavations:**

7	Sides of trench and hole excavations not exceeding 1,5m deep	m2	24
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**Keeping excavations free of water:**

8	Keeping excavations free of all water other than subterranean water		Item
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**FILLING ETC**

**Carried Forward**

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Section No. 6  
 SM3 + 3UR Male and Educators Ablutions  
 Bill No. 1  
 EARTHWORKS  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Brought Forward			R
<b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:</u></b>			
9	Backfilling to trenches, holes, etc	m3	3
<b><u>G5 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:</u></b>			
10	Under floors, steps, pavings, etc	m3	2
<b><u>Compaction of surfaces:</u></b>			
11	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 91% Mod AASHTO density	m2	20
<b><u>Prescribed density tests on filling:</u></b>			
12	"Modified AASHTO Density" test	No	8
<b><u>SOIL POISONING</u></b>			
<b><u>Soil insecticide in accordance with SANS 5859:</u></b>			
13	Soil insecticide (protection against termites) applied as specified under floors, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	15
14	To bottoms and sides of trenches, etc	m2	38
<b>Carried Forward to Summary of Section No. 6</b>			R
Section No. 6			
SM3 + 3UR Male and Educators Ablutions			
Bill No. 1			
EARTHWORKS			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofeza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 6</u></b></p>			
<p><b><u>BILL NO.2</u></b></p>			
<p><b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b></p>			
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<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Cost of tests:</u></b></p>			
<p><b><u>Breeze concrete:</u></b></p>			
<p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated</p>			
<p><b><u>Lightweight concrete:</u></b></p>			
<p>Lightweight concrete shall have a density of 600kg/m<sup>3</sup> for the top 50mm and 400kg/m<sup>3</sup> for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Waterproof concrete:**

"Waterproof concrete" shall have the same properties as normal concrete, but the following shall be modified to make the the concrete more water-tight:

1. a cement/water ratio of minimum 1.9 and maximum 2.1
2. minimum OPC content of 300kg/m<sup>3</sup>
3. Polypropylene micro fibres added to concrete at rate of 182 million per m<sup>3</sup>

**Formwork:**

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

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 soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described

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**UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**15MPa/19mm concrete:**

1	Surface blinding under footings and bases	m <sup>3</sup>		1
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**REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**Carried Forward**

R

Section No. 6  
 SM3 + 3UR Male and Educators Ablutions  
 Bill No. 2  
 CONCRETE, FORMWORK AND REINFORCEMENT  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

<b>Brought Forward</b>			R
<b><u>30MPa/19mm concrete:</u></b>			
	Strip footings	m3	3
	Surface beds on waterproofing	m3	3
<b><u>TEST BLOCKS</u></b>			
2	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	2
<b><u>CONCRETE SUNDRIES</u></b>			
<b><u>Finishing top surfaces of concrete smooth with a steel trowel:</u></b>			
3	Surface beds, slabs, etc	m2	15
<b><u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u></b>			
<b><u>Rough formwork to sides:</u></b>			
4	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	40
<b><u>MOVEMENT JOINTS, ETC</u></b>			
<b><u>Expansion joints with 10mm softboard between vertical concrete and brick surfaces:</u></b>			
5	Not exceeding 300mm high to edges of surface beds	m	32
<b><u>Saw-cut joints:</u></b>			
6	6 x 10mm Saw-cut joints in top of concrete	m	39
<b><u>REINFORCEMENT (PROVISIONAL)</u></b>			
<b><u>Mild steel reinforcement to structural concrete work:</u></b>			
7	Mild steel bar reinforcement (8 to 40mm diameter bars)	t	0.08
<b>Carried Forward</b>			R
Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

Brought Forward			R
<b><u>High tensile steel reinforcement to structural concrete work:</u></b>			
8	High tensile steel bar reinforcement (8 to 40mm diameter bars)	t	0.18
<b><u>Fabric reinforcement:</u></b>			
9	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	15
<b>Carried Forward to Summary of Section No. 6</b>			R
Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing</b> <b>Fofzo Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 6</u></b></p> <p><b><u>BILL NO.3</u></b></p> <p><b><u>MASONRY</u></b></p> <p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>BRICKWORK</u></b></p> <p><b><u>General:</u></b></p> <p>Non-load bearing brickwork is to be built to full height less 20mm gap next to the ceiling and is to be left for 14 days before grouting up in 1:3 cement mortar.</p> <p><b><u>Sizes in descriptions:</u></b></p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p><b><u>Hollow walls:</u></b></p> <p>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</p>			
<p><b>Carried Forward</b></p>		R	
<p>Section No. 6            SM3 + 3UR Male and Educators Ablutions            Bill No. 3            MASONRY  <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b></p>			

**Brought Forward**

R

**Bagged and sealed walls:**

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 bitumen emulsion waterproofing coating

**Face bricks :**

Bricks shall be ordered timeously to obtain uniformity in size and colour

All face brickwork shall be regularly cleaned down as the work proceeds and shall be protected as necessary by an approved method

**Pointing:**

Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include smooth floated square recessed, hollow recessed, weathered pointing, etc

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**FOUNDATIONS (PROVISIONAL)****Brickwork of NFP bricks (14 MPa nominal compressive strength) in class 1 mortar:**

1	One brick walls	m2	10
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**2,5mm Brickwork reinforcement:**

2	150mm Wide reinforcement built in horizontally	m	58
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**FACE BRICKWORK****Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints**

3	Extra over brickwork for face brickwork	m2	3
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**SUPERSTRUCTURE****Carried Forward**

R

Section No. 6  
SM3 + 3UR Male and Educators Ablutions  
Bill No. 3  
MASONRY  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

Brought Forward			R
<b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar in loadbearing walls etc:</u></b>			
4	One brick walls	m2	57
<b><u>BRICKWORK SUNDRIES</u></b>			
<b><u>Joint forming material in movement joints:</u></b>			
5	12mm Fibre board built in vertically through brick walls	m	50
<b><u>2,5mm Brickwork reinforcement:</u></b>			
6	75mm Wide reinforcement built in horizontally	m	54
7	150mm Wide reinforcement built in horizontally	m	183
<b><u>Prestressed fabricated concrete lintels, including necessary temporary supports:</u></b>			
8	110 x 75mm Lintels in lengths not exceeding 3m long	m	19
<b><u>FACE BRICKWORK</u></b>			
<b><u>Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u></b>			
9	Half brick wall faced on both sides	m2	13
10	Extra over brickwork for face brickwork	m2	104
11	Extra over brickwork for brick-on-edge header course lintel pointed on face and 120mm soffit	m	6
12	Fair raking cutting	m	10
<b><u>Brick-on-edge header course coping, sills, etc. of face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with recessed joints on all exposed faces</u></b>			
13	150mm Wide sills set sloping and slightly projecting	m	5
<b>Carried Forward to Summary of Section No. 6</b>			R
Section No. 6			
SM3 + 3UR Male and Educators Ablutions			
Bill No. 3			
MASONRY			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 6</u></b></p>			
<p><b><u>BILL NO.4</u></b></p>			
<p><b><u>WATERPROOFING</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Waterproofing:</u></b></p>			
<p>Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets, etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs</p>			
<p>-----</p> <p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 4 WATERPROOFING <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>			
		R	

Brought Forward

R

**DAMPPROOFING OF WALLS AND FLOORS**

**One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B):**

1	In walls	m2	56
2	In walls vertically at reveals	m2	3

**One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:**

3	Under surface beds	m2	18
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**JOINT SEALANTS ETC**

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

4	6 x 10mm In saw cut joints in floors	m	39
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**White silicone sealing compound including backing cord, bond breaker, primer, etc**

5	6 x 10mm In expansion joints in floors, including raking out expansion joint filler as necessary [ LI ]	m	32
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**Carried Forward to Summary of Section No. 6**

R

Section No. 6  
 SM3 + 3UR Male and Educators Ablutions  
 Bill No. 4  
 WATERPROOFING  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 6</u></b></p>			
<p><b><u>BILL NO.5</u></b></p>			
<p><b><u>ROOF COVERINGS</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p>Profiled metal roof sheeting and accessories shall be supplied with a 10 year guarantee and be installed by an approved installer</p>			
<p>All fixing holes shall be drilled and not punched</p>			
<p>Roof covering accessories shall be manufactured from the same material as used for roof covering</p>			
<p>-----</p> <p><b><u>PROFILED METAL SHEETING AND ACCESSORIES</u></b></p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 5 ROOF COVERINGS <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

Brought Forward		R
<p><b><u>0,6 mm "Klip-Lok 406" or similar approved light industrial Z275 spelter galvanised steel sheeting, with "Classicoat" finish one side and half coat "Classicoat Grey" other side, and accessories fixed to timber purlins or rails at approximately 1500mm centres:</u></b></p>		
1	Roof coverings with pitch not exceeding 25 degrees	m2 34
<p><b><u>Accessories:</u></b></p>		
2	Apex flashings 462mm girth	m 7
<p><b><u>ROOF AND WALL INSULATION</u></b></p>		
<p><b><u>"Sisalation 405" or similar approved residential grade aluminium foil based insulation:</u></b></p>		
3	Insulation sheeting laid taut over purlins at approximately 1000mm centres and fixed concurrent with roof covering with minimum 150mm stapled laps, including galvanised steel straining wires at not exceeding 400mm centres and double-sided tape at edges where required	m2 34
<p><b>Carried Forward to Summary of Section No. 6</b></p>		
<p>Section No. 6            SM3 + 3UR Male and Educators Ablutions            Bill No. 5            ROOF COVERINGS  <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b></p>		
		R

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 6</u></b></p>			
<p><b><u>BILL NO.6</u></b></p>			
<p><b><u>CARPENTRY AND JOINERY</u></b></p>			
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<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Fixing:</u></b></p>			
<p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete</p>			
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given separately elsewhere</p>			
<p><b><u>Joinery:</u></b></p>			
<p>Descriptions of frames shall be deemed to include frames, transoms, rails, etc</p>			
<p>Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts</p>			
<p><b>Carried Forward</b></p>		R	
<p>Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 6 CARPENTRY AND JOINERY <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>			

**Brought Forward**

R

**Particle board**

All particle board shall comply with SANS 50312 having the required marking as per SANS 50312/EN 312

**Decorative thermosetting plastic laminate covering:**

Laminate covering shall be glued under pressure and edge strips of same shall be butt jointed at junctions with adjacent similar finish

**Sizes:**

Sizes are nominal and the Contractor shall make allowance in his prices for minor variances in stated finished sizes of timber doors, door members, door frames, architraves, etc

**Prices**

Prices for all joinery work are to include for general framing, housing and notching, arris rounded angles, glueing, blocking, planting on, screwing, adhesives, dowels, pellets, cross tongues, screws and nails and setting up complete and also for all square cutting and waste. Tops shall be secured with metal or hardwood buttons.

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**ROOFS, ETC**

**Sawn softwood grade 5:**

1	38 x 114mm Wall plates bolted	m	14
2	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	45
3	50 x 76mm Purlins	m	46

**EAVES, VERGES, ETC**

**Carried Forward**

R

Section No. 6  
 SM3 + 3UR Male and Educators Ablutions  
 Bill No. 6  
 CARPENTRY AND JOINERY  
**Construction of Water, Sanitation and Fencing  
 Fofzo Primary School**

<b>Brought Forward</b>		R
<b><u>Medium density plain fibre-cement fascias and barge boards:</u></b>		
4	19 x 235mm Fascias and barge boards, including aluminium H-profile jointing strips	17
	m	
<b><u>DOORS, ETC</u></b>		
<b><u>Wrought meranti doors hung to steel frames:</u></b>		
5	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding including 150mm undercut (D2)	3
	No	
6	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	1
	No	
<b>Carried Forward to Summary of Section No. 6</b>		
Section No. 6		
SM3 + 3UR Male and Educators Ablutions		
Bill No. 6		
CARPENTRY AND JOINERY		
<b>Construction of Water, Sanitation and Fencing</b>		
<b>Fofoza Primary School</b>		
		R

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 6</u></b></p>			
<p><b><u>BILL NO.7</u></b></p>			
<p><b><u>IRONMONGERY</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Proprietary items:</u></b></p>			
<p>Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items</p>			
<p>Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.</p>			
<p>Prices are to be based on the specific products/articles specified.</p>			
<p>On request, returnable samples are to be provided to the Project Manager for consideration</p>			
<p><b><u>Locks:</u></b></p>			
<p>Notwithstanding Clause 2, Item 3 of the "Ironmongery" trade of the Standard System (7th Edition, 2015) of Measuring Building Wor, descriptions of locks shall be deemed to include two keys per lock</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 7 IRONMONGERY <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Finishes to ironmongery:**

Where applicable, finishes to ironmongery are indicated by suffixes in accordance with the following list:

BS Satin bronze lacquered  
 CH Chromium plated  
 SC Satin chromium plated  
 SE Silver enamelled  
 GE Grey enamelled  
 AN Anodised natural  
 AS Anodised silver  
 AB Anodised bronze  
 AG Anodised gold  
 ABL Anodised black  
 PB Polished brass  
 PL Polished and lacquered  
 PT Epoxy coated  
 SD Sanded  
 BBS Brushed stainless steel

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**CATCHES, CABIN HOOKS, ETC**

1	150mm Cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	3
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**LOCKS****"Union Assa Abloy" or similar approved:**

2	50mm Brass padlock	No	1
3	Four lever lockset	No	1
4	"Ref. CZ80941SC" Indicator bolt	No	3

**HANDLES****"Union Assa Abloy" or similar approved:**

5	ASSA ABLOY Anodised Silver straight pull handle (Code: AL5515-300BBAS) with 300mm fixing centres	Pairs	1.0
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**Carried Forward**

R

Section No. 6  
 SM3 + 3UR Male and Educators Ablutions  
 Bill No. 7  
 IRONMONGERY  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Brought Forward		R
<b><u>PUSH PLATES AND KICK PLATES</u></b>		
<b><u>"Union Assa Abloy" or similar approved:</u></b>		
<b><u>1.2mm Thick satin finished "Union" stainless steel plates countersunk screwed along edges at not exceeding 200mm centres</u></b>		
6	200 x 800mm Type "SS5089-200W" kicking plate	6
	No	
<b><u>LETTERS, NAMEPLATES, ETC</u></b>		
<b><u>"Dorma" or similar approved:</u></b>		
7	DSS-130 Engraved "Male" information sign	1
	No	
<b><u>SUNDRIES</u></b>		
8	25mm Diameter wall mounted door stop plugged	4
	No	
<b><u>BATHROOM FITTINGS</u></b>		
<b><u>"Kimberley-Clark" or similar approved:</u></b>		
9	"Ref. SQ2 code 405607B" white lockable toilet roll holder	3
	No	
<b>Carried Forward to Summary of Section No. 6</b>		
Section No. 6		
SM3 + 3UR Male and Educators Ablutions		
Bill No. 7		
IRONMONGERY		
<b>Construction of Water, Sanitation and Fencing</b>		
<b>Fofza Primary School</b>		
		R

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 6</u></b></p>			
<p><b><u>BILL NO.8</u></b></p>			
<p><b><u>METALWORK</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Descriptions of bolts, anchors, etc:</u></b></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>Items described as "holed for bolt(s)" shall be deemed to exclude the bolts, unless otherwise described</p>			
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 8 METALWORK <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Fixing:**

Unless otherwise described, descriptions of items shall be deemed to include for fixing to brickwork or concrete

Where items are described as "bolted", the bolts are measured elsewhere as stated in clause N.7 of the Model Preambles

**References:**

References in descriptions of windows, doors, gates, etc refer to the respective types of windows, doors, etc detailed in the Architect's window schedules numbered

- 21111/FSPS/S005
- T-2003
- T-2004
- T-2005

and bound into the back of these bills of quantities

Tenderers are to price the following items in conjunction with the above Architect's drawings, etc and no claim arising from brevity of descriptions in these bills of quantities, of items shown on the Architect's drawings, etc shall be entertained

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**Carried Forward**

R

Section No. 6  
 SM3 + 3UR Male and Educators Ablutions  
 Bill No. 8  
 METALWORK

**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

<b>Brought Forward</b>		R
<b><u>STEEL GATES, SCREENS, ETC</u></b>		
<b><u>Welded screens and gates, to brickwalls:</u></b>		
1	Single gate and frame size to fit standard door, size 813 x 2032mm high	No 1
<b><u>PRESSED STEEL DOOR FRAMES</u></b>		
<b><u>1,6mm Double rebated frames suitable for half brick walls:</u></b>		
2	Frame for door size 813 x 2032mm high	No 3
<b><u>1,6mm Double rebated frames suitable for one brick walls:</u></b>		
3	Frame for door size 813 x 2032mm high	No 1
<b><u>STEEL WINDOWS, DOORS, ETC</u></b>		
<b><u>Standard windows:</u></b>		
4	Window type NE1, 533 x 654mm high (N1)	No 5
5	Window type NE7, 1022 x 654mm high (N2)	No 2
<b>Carried Forward to Summary of Section No. 6</b>		
Section No. 6		
SM3 + 3UR Male and Educators Ablutions		
Bill No. 8		
METALWORK		
<b>Construction of Water, Sanitation and Fencing</b>		
<b>Fofza Primary School</b>		
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Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 6</u></b></p>			
<p><b><u>BILL NO.9</u></b></p>			
<p><b><u>PLASTERING</u></b></p> <p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Moisture tests:</u></b></p>			
<p>Before any finishes, coverings, etc are applied to screeds, plastering, etc or any other in-situ finish, moisture tests are to be carried out to the complete satisfaction of the Project Manager to ensure that these surfaces have the correct moisture content for the finish to be applied</p>			
<p><b><u>Labours, etc</u></b></p>			
<p>Labours such as fair, rounded and chamfered edges, trowel cuts, throats, V-joints, angles, etc shall be deemed to be included in the descriptions</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 9 PLASTERING <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

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**Sample Panels**

A sample panel size 1m x1m, of each of the various plaster type wall and floor finishes in this contract, shall be prepared for the approval of the Project Manager and the cost of the sample panel(s) shall be deemed to be included in the overall costs of the relevant wall and floor finishes

**GRANOLITHIC****Method:**

The method to be used shall be either the monolithic method or the bonded method

**Preparation:**

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

**Mix:**

Unless otherwise described, granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SANS 1083 and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the size of the coarse aggregate shall be increased to the maximum size compatible with the thickness of the granolithic

**Carried Forward**

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SM3 + 3UR Male and Educators Ablutions  
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PLASTERING  
**Construction of Water, Sanitation and Fencing  
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**Panels:**

Granolithic shall be laid in panels not exceeding 14m<sup>2</sup> for monolithic finishes, not exceeding 9,5m<sup>2</sup> for bonded finishes and not exceeding 6m<sup>2</sup> for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1,5 times its width

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

**Laying:**

Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels

Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels

After wood floating, the monolithic and bonded granolithic shall remain undisturbed until bleeding has ceased and the surface has stiffened. Any remaining bleed water and laitance shall then be removed and the surface steel trowelled or power floated

**Curing, seasoning and protection:**

Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying

**Colour:**

Coloured granolithic shall be tinted with an approved colouring pigment mixed into a true and even colour

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**TINTED WHITE CEMENT SCREEDS**

Tinted screed shall be composed of one bag White Portland Cement and two wheelbarrows "Malmesbury" sand. Surfaces shall be finished with a steel trowel to leave a smooth finish and coated with two coats "Earthcote S.I. Floorcote" two-pack polyurethane floor sealer applied as per the manufacturer's recommendations

NOTE: Tinted screeds are to be strengthened with "Primal Eccos" acrylic polymer (15% of the water volume is to be substituted with the acrylic polymer during the mixing process)

Coarse sand is to be used for these screeds

All tinting, finishing, strengthening, etc are to be mixed, applied, etc strictly in accordance with the manufacturer's instructions

**CEMENT PLASTER**

Unless otherwise described, cement plaster shall be taken to mean Class 1 cement plaster i.e. 1:4 cement:sand plaster (common cement)

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**GRANOLITHIC**

**Untinted granolithic, on concrete:**

1	30mm Thick on floors and landings	m2	15
2	Skirtings 150mm high	m	32

**Carried Forward to Summary of Section No. 6**

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Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 6</u></b></p>			
<p><b><u>BILL NO.10</u></b></p>			
<p><b><u>PLUMBING AND DRAINAGE</u></b> <b><u>(PROVISIONAL)</u></b></p>			
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<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Wire gratings:</u></b></p>			
<p>Descriptions of gutter outlets, etc shall be deemed to include wire balloon gratings</p>			
<p><b><u>Stormwater channels:</u></b></p>			
<p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc and disposal of surplus material on site</p>			
<p><b><u>French drains:</u></b></p>			
<p>Descriptions of french drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, approved geofabric filter blanket over stone, 300mm earthfilling over and disposal of surplus material on site</p>			
<p><b>Carried Forward</b></p>		R	
<p>Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b></p>			

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**Septic tanks:**

Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site

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

Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)

Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)

Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)

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

**Sealing of edges:**

Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved mildew resistant silicone sealant and prices must include therefor

**uPVC pipes and fittings:**

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

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

**Carried Forward**

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**uPVC pressure pipes and fittings:**

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

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

**High density polyethylene (HDPE) pipes and fittings:**

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

**"Polycop" polypropylene pipes:**

Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings

Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions

**Copper pipes:**

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

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

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**Reducing fittings:**

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm, only the largest end or branch 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 claims for extra bushes, reducers, etc will be entertained

**Fixing of pipes:**

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

**Paper wrapping to pipes:**

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

**Disinfection of water pipework:**

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

**"Densyl" petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd.:**

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with suitable overlaps

Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, "Layflat" sheeting, securing of same, etc

Prices for wrapping of pipes shall include for all work as described to couplings in the length

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**Laying, backfilling, bedding, etc of pipes:**

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

Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following:

- SANS 1200L : Medium-pressure pipelines
- SANS 1200LD : Sewers
- SANS 1200LE : Stormwater drainage

Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200DB : Earthworks (Pipe trenches)

Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200LB : Bedding (Pipes)

Unless otherwise described, bedding of rigid pipes shall be Class B bedding

**General:**

Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc are given separately)

Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 98% Mod AASHTO density and disposal of surplus material on site

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

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Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured) and shall have straight or side outlets and "P" or "S" traps as necessary

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

**As-built drawings:**

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

**Proprietary items:**

Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items

Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.

Prices are to be based on the specific products/articles specified.

On request, returnable samples are to be provided to the Project Manager for consideration

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**RAINWATER DISPOSAL**

**0,6mm Galvanised sheet steel gutters and rainwater pipes with powder coated finish on outside to match roof sheeting colour:**

1	150 x150mm Box gutters	m	7
2	100 x 75mm Rainwater pipes	m	3
3	Extra over gutter for stopped end	No	2

**Carried Forward**

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<b>Brought Forward</b>			R
4	Extra over gutter for outlet for 100 x 75mm pipe	No	2
5	Extra over rainwater pipe for bend	No	2
6	Extra over rainwater pipe for shoe	No	2
7	Extra over rainwater pipe for eaves or plinth offset	No	2
<b>Carried Forward</b>			R
Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b>			

<b>Brought Forward</b>			R
<b><u>SANITARY FITTINGS</u></b>			
<b><u>"Vaal" or similar approved:</u></b>			
8	455 x 290mm "Hibiscus" 7050 wash hand basin bolted to wall	No	2
9	"Daisy Elite" 772403 close-coupled WC suite comprising pan with double flap heavy duty thermoset seat (Code: 8531Z0) and matching 9 litre cistern	No	3
10	Flat back urinal overall size 295 x 315 x 415mm high with 40mm chromium plated domical grating (Code 878720 ) and top inlet spreader (Code 8543) with two hanger brackets with flushmaster junior (Code 812720) hung to wall	No	3
<b><u>TRAPS, ETC</u></b>			
<b><u>"Cobra Watertech" or similar approved:</u></b>			
11	50mm Code 365 CP bottle trap	No	2
<b><u>TAPS, VALVES, ETC</u></b>			
<b><u>"Cobra Watertech" or similar approved:</u></b>			
12	15mm Code 232/350 FCP angle regulating valve and flexible connection pipe	No	5
13	15mm Code FPT2A1RO-OGP01 "Roma" basin tap with waste union	No	2
<b><u>SANITARY PLUMBING</u></b>			
<b><u>uPVC pipes:</u></b>			
14	50mm Pipes	m	25
15	110mm Pipes	m	15
16	50mm Diameter pipe laid in and including trenches not exceeding 1m deep	m	75
<b>Carried Forward</b>			R
Section No. 6			
SM3 + 3UR Male and Educators Ablutions			
Bill No. 10			
PLUMBING AND DRAINAGE			
<b>Construction of Water, Sanitation and Fencing</b>			
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Brought Forward			R
17	Ditto, but 110mm diameter	m	45
<b><u>Extra over uPVC pipes for fittings:</u></b>			
18	50mm Bend	No	10
19	50mm Junction	No	10
20	50mm Junction with cleaning eye and lid	No	10
21	110mm Straight pan connector	No	3
22	110mm Bend	No	6
23	110mm Junction	No	6
24	110mm Reducing junction	No	9
25	110mm Access bend	No	3
26	110mm Double junction	No	9
27	110mm "GI Two-way" vent valve	No	3
<b><u>Testing:</u></b>			
28	Testing waste pipe system		Item
<b><u>WATER SUPPLIES</u></b>			
<b><u>Class 1 copper pipes with capillary couplings:</u></b>			
29	15mm Pipe fixed to walls, in chases, etc	m	24
30	Ditto, but 22mm diameter	m	40
<b><u>Extra over Class 1 copper pipes for capillary fittings:</u></b>			
31	15mm Fittings	No	40
32	22mm Fittings	No	40
<b>Carried Forward</b>			R
Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

**Brought Forward**

R

**Testing:**

33 Testing water pipe system

Item

**Carried Forward to Summary of Section No. 6**

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 Bill No. 10  
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Item No	<b><u>SECTION NO. 6</u></b>	Quantity	Rate	Amount
	<b><u>BILL NO.11</u></b>			
	<b><u>GLAZING</u></b>			
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	<b><u>PREAMBLES</u></b>			
	<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	<b><u>Float glass:</u></b>			
	<p>The term "float glass" is used for monolithic annealed glass</p>			
	<b><u>Laminated glass:</u></b>			
	<p>Laminated glass to have polyvinyl butyral (PVB) interlayer(s)</p>			
	-----			
	<b><u>GLAZING TO STEEL WITH PUTTY</u></b>			
	<b><u>6,38mm Obscure safety glass:</u></b>			
1	Panes not exceeding 0,1m <sup>2</sup>	m2	3	
	<b>Carried Forward to Summary of Section No. 6</b>			R
	<p>Section No. 6            SM3 + 3UR Male and Educators Ablutions            Bill No. 11            GLAZING  <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b></p>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 6</u></b></p>			
<p><b><u>BILL NO.12</u></b></p>			
<p><b><u>PAINTWORK</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>PREPARATORY WORK TO EXISTING WORK</u></b></p>			
<p><b><u>Previously painted plastered surfaces:</u></b></p> <p>Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and minor cracks shall be opened, filled with a suitable filler and finished smooth</p>			
<p><b><u>Previously painted metal surfaces:</u></b></p> <p>Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 6 SM3 + 3UR Male and Educators Ablutions Bill No. 12 PAINTWORK <b>Construction of Water, Sanitation and Fencing Fofeza Primary School</b></p>		R	

**Brought Forward**

R

**Previously painted wood surfaces:**

Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth

**PAINT SPECIFICATIONS**

All painting shall be done in accordance with "Plascon", etc specifications, unless otherwise described

**COLOURS**

When staining timber, the resultant colour or shade must be to the complete satisfaction of the Project Manager before any overcoating or preservative is applied

Paintwork is classified in the following different colour groups: "White", "Pastel", "Deep" and "Transparent" in accordance with the "Natural Colour System" (NCS) adopted by the SA National Standards  
Unless otherwise described, all paintwork shall be deemed to be classified in the "White" colour group

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**PAINTWORK, ETC TO NEW WORK**

**ON FIBRE-CEMENT BOARD SURFACES**

**One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use, on:**

1	Fascias and barge boards, including priming metal jointing strips	m2	4
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**METAL SURFACES WITH**

**One coat alkyd based zinc phosphate primer and two coats premium quality polyurethane enamel paint, on steel:**

2	Door frames	m2	7
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**Carried Forward**

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SM3 + 3UR Male and Educators Ablutions  
Bill No. 12  
PAINTWORK  
**Construction of Water, Sanitation and Fencing  
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<b>Brought Forward</b>			R
3	Windows	m2	6
4	Gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	3
5	Extra over for paintwork in the "Deep" colour group	m2	17
<b><u>ON WOOD SURFACES</u></b>			
<b><u>One coat primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on:</u></b>			
6	Doors	m2	14
7	Roof timbers at eaves and verges	m2	29
8	Extra over for paintwork in the "Deep" colour group	m2	44
<b>Carried Forward to Summary of Section No. 6</b>			R
Section No. 6			
SM3 + 3UR Male and Educators Ablutions			
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	<b>Carried to Final Summary</b>		
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Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 7</u></b></p>			
<p><b><u>BILL NO.1</u></b></p>			
<p><b><u>EARTHWORKS (PROVISIONAL)</u></b></p> <p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Nature of ground</u></b></p>			
<p>The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "hard rock" or "soft rock".</p>			
<p>The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock".</p>			
<p>The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, therefore "earth", but possibly interspersed with "hard rock".</p>			
<p>Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth". The trial holes also indicate that the water table is at a maximum depth of approximately 1000mm.</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 7  M6 + 5UR and M4 +4UR Male Ablutions  Bill No. 1  EARTHWORKS  <b>Construction of Water, Sanitation and Fencing  Fofza Primary School</b></p>		R	

**Brought Forward**

A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured

**Subterranean water:**

No subterranean water is expected

Should the Contractor however, encounter any subterranean water on the site, he shall immediately notify the Principal Agent thereof and submit recommendations for keeping the works free from subterranean water together with all costs involved therewith

**Excavation for working space in rock:**

Notwithstanding clause 10 measurement rule 27 of the Standard System of Measuring Building Work, excavation for working space in material of a more different character (e.g. soft or hard rock) will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be

**Carting away of excavated material**

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

**Filling**

Notwithstanding the reference to prescribed multiple handling in clause 1 page 10 of the Standard System (7th Edition, 2015) of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material

**Carried Forward**

Section No. 7  
M6 + 5UR and M4 +4UR Male Ablutions  
Bill No. 1  
EARTHWORKS  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

R

R

Brought Forward			R
<b><u>Testing:</u></b>			
<i>Prices for backfilling to trenches and holes only are to include for all necessary density tests in accordance with SANS 1200D</i>			
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<b><u>EXCAVATIONS, FILLING, ETC</u></b>			
<b><u>EXCAVATIONS, ETC</u></b>			
<b><u>Excavation in earth not exceeding 2m deep:</u></b>			
1	Reduced levels under floors	m3	6
2	Trenches	m3	18
3	Holes	m3	43
4	Trenches and holes for thickening under surface beds, etc	m3	5
<b><u>Extra over trench and hole excavations in earth for excavation in:</u></b>			
5	Soft rock	m3	6
6	Hard rock	m3	3
<b><u>Extra over all excavations for carting away:</u></b>			
7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	66
<b><u>Risk of collapse of excavations:</u></b>			
8	Sides of trench and hole excavations not exceeding 1,5m deep	m2	106
<b><u>Keeping excavations free of water:</u></b>			
9	Keeping excavations free of all water other than subterranean water		Item
<b><u>FILLING ETC</u></b>			
Carried Forward			R
Section No. 7 M6 + 5UR and M4 +4UR Male Ablutions Bill No. 1 EARTHWORKS <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b>			

Brought Forward			R
<b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:</u></b>			
10	Backfilling to trenches, holes, etc	m3	6
<b><u>G5 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:</u></b>			
11	Under floors, steps, pavings, etc	m3	10
<b><u>Compaction of surfaces:</u></b>			
12	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 91% Mod AASHTO density	m2	65
<b><u>Prescribed density tests on filling:</u></b>			
13	"Modified AASHTO Density" test	No	8
<b><u>SOIL POISONING</u></b>			
<b><u>Soil insecticide in accordance with SANS 5859:</u></b>			
14	Soil insecticide (protection against termites) applied as specified under floors, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	118
15	To bottoms and sides of trenches, etc	m2	83
<b>Carried Forward to Summary of Section No. 7</b>			R
Section No. 7			
M6 + 5UR and M4 +4UR Male Ablutions			
Bill No. 1			
EARTHWORKS			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 7</u></b></p>			
<p><b><u>BILL NO.2</u></b></p>			
<p><b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b></p>			
-----			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Cost of tests:</u></b></p>			
<p><b><u>Breeze concrete:</u></b></p>			
<p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated</p>			
<p><b><u>Lightweight concrete:</u></b></p>			
<p>Lightweight concrete shall have a density of 600kg/m<sup>3</sup> for the top 50mm and 400kg/m<sup>3</sup> for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 7 M6 + 5UR and M4 +4UR Male Ablutions Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Waterproof concrete:**

"Waterproof concrete" shall have the same properties as normal concrete, but the following shall be modified to make the the concrete more water-tight:

1. a cement/water ratio of minimum 1.9 and maximum 2.1
2. minimum OPC content of 300kg/m<sup>3</sup>
3. Polypropolene micro fibres added to concrete at rate of 182 million per m<sup>3</sup>

**Formwork:**

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

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 soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described

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**UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**15MPa/19mm concrete:**

1	Surface blinding under footings and bases	m <sup>3</sup>	2
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**REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**Carried Forward**

R

Section No. 7  
 M6 + 5UR and M4 +4UR Male Ablutions  
 Bill No. 2  
 CONCRETE, FORMWORK AND REINFORCEMENT  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Brought Forward			R
<b><u>30MPa/19mm concrete:</u></b>			
	Strip footings	m3	7
	Surface beds on waterproofing	m3	9
	Surface beds in tank bottoms	m3	4
<b><u>TEST BLOCKS</u></b>			
2	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	22
<b><u>CONCRETE SUNDRIES</u></b>			
<b><u>Finishing top surfaces of concrete smooth with a steel trowel:</u></b>			
3	Surface beds, slabs, etc	m2	65
<b><u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u></b>			
<b><u>Rough formwork to sides:</u></b>			
4	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	88
<b><u>MOVEMENT JOINTS, ETC</u></b>			
<b><u>Expansion joints with 10mm softboard between vertical concrete and brick surfaces:</u></b>			
5	Not exceeding 300mm high to edges of surface beds	m	86
<b><u>Saw-cut joints:</u></b>			
6	6 x 10mm Saw-cut joints in top of concrete	m	103
<b><u>REINFORCEMENT (PROVISIONAL)</u></b>			
<b><u>Mild steel reinforcement to structural concrete work:</u></b>			
7	Mild steel bar reinforcement (8 to 40mm diameter bars)	t	0.17
<b>Carried Forward</b>			R
Section No. 7 M6 + 5UR and M4 +4UR Male Ablutions Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

Brought Forward			R
<b><u>High tensile steel reinforcement to structural concrete work:</u></b>			
8	High tensile steel bar reinforcement (8 to 40mm diameter bars)	t	0.40
<b><u>Fabric reinforcement:</u></b>			
9	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	65
<b>Carried Forward to Summary of Section No. 7</b>			R
Section No. 7 M6 + 5UR and M4 +4UR Male Ablutions Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 7</u></b></p>			
<p><b><u>BILL NO.3</u></b></p>			
<p><b><u>MASONRY</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>BRICKWORK</u></b></p>			
<p><b><u>General:</u></b></p>			
<p>Non-load bearing brickwork is to be built to full height less 20mm gap next to the ceiling and is to be left for 14 days before grouting up in 1:3 cement mortar.</p>			
<p><b><u>Sizes in descriptions:</u></b></p>			
<p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p>			
<p><b><u>Hollow walls:</u></b></p>			
<p>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</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 7 M6 + 5UR and M4 +4UR Male Ablutions Bill No. 3 MASONRY <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>			
		R	

**Brought Forward**

R

**Bagged and sealed walls:**

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 bitumen emulsion waterproofing coating

**Face bricks :**

Bricks shall be ordered timeously to obtain uniformity in size and colour

All face brickwork shall be regularly cleaned down as the work proceeds and shall be protected as necessary by an approved method

**Pointing:**

Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include smooth floated square recessed, hollow recessed, weathered pointing, etc

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**FOUNDATIONS (PROVISIONAL)****Brickwork of NFP bricks (14 MPa nominal compressive strength) in class 1 mortar:**

1	One brick walls	m2	87
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**2,5mm Brickwork reinforcement:**

2	150mm Wide reinforcement built in horizontally	m	275
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**FACE BRICKWORK****Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints**

3	Extra over brickwork for face brickwork	m2	10
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**SUPERSTRUCTURE****Carried Forward**

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Section No. 7  
M6 + 5UR and M4 +4UR Male Ablutions  
Bill No. 3  
MASONRY  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

Brought Forward			R
<b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar in loadbearing walls etc:</u></b>			
4	One brick walls	m2	125
<b><u>BRICKWORK SUNDRIES</u></b>			
<b><u>Joint forming material in movement joints:</u></b>			
5	12mm Fibre board built in vertically through brick walls	m	28
<b><u>2,5mm Brickwork reinforcement:</u></b>			
6	75mm Wide reinforcement built in horizontally	m	204
7	150mm Wide reinforcement built in horizontally	m	405
<b><u>Prestressed fabricated concrete lintels, including necessary temporary supports:</u></b>			
8	110 x 75mm Lintels in lengths not exceeding 3m long	m	55
<b><u>FACE BRICKWORK</u></b>			
<b><u>Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u></b>			
9	Half brick wall faced on both sides	m2	52
10	Extra over brickwork for face brickwork	m2	215
11	Extra over brickwork for brick-on-edge header course lintel pointed on face and 120mm soffit	m	16
12	Fair raking cutting	m	16
<b><u>Brick-on-edge header course coping, sills, etc. of face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with recessed joints on all exposed faces</u></b>			
13	150mm Wide sills set sloping and slightly projecting	m	15
<b>Carried Forward to Summary of Section No. 7</b>			R
Section No. 7			
M6 + 5UR and M4 +4UR Male Ablutions			
Bill No. 3			
MASONRY			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 7</u></b></p>			
<p><b><u>BILL NO.4</u></b></p>			
<p><b><u>WATERPROOFING</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Waterproofing:</u></b></p>			
<p>Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets, etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs</p>			
<p>-----</p> <p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 7 M6 + 5UR and M4 +4UR Male Ablutions Bill No. 4 WATERPROOFING <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

## Brought Forward

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**DAMPPROOFING OF WALLS AND FLOORS****One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B):**

1	In walls	m2	126
2	In walls vertically at reveals	m2	8

**One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:**

3	Under surface beds	m2	48
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**JOINT SEALANTS ETC****Two- part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc**

4	6 x 10mm In saw cut joints in floors	m	103
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**White silicone sealing compound including backing cord, bond breaker, primer, etc**

5	6 x 10mm In expansion joints in floors, including raking out expansion joint filler as necessary [ LI ]	m	86
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**Carried Forward to Summary of Section No. 7**

R

Section No. 7

M6 + 5UR and M4 +4UR Male Ablutions

Bill No. 4

WATERPROOFING

**Construction of Water, Sanitation and Fencing****Fofoza Primary School**

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 7</u></b></p>			
<p><b><u>BILL NO.5</u></b></p>			
<p><b><u>ROOF COVERINGS</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p>Profiled metal roof sheeting and accessories shall be supplied with a 10 year guarantee and be installed by an approved installer</p>			
<p>All fixing holes shall be drilled and not punched</p>			
<p>Roof covering accessories shall be manufactured from the same material as used for roof covering</p>			
<p>-----</p> <p><b><u>PROFILED METAL SHEETING AND ACCESSORIES</u></b></p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 7  M6 + 5UR and M4 +4UR Male Ablutions  Bill No. 5  ROOF COVERINGS  <b>Construction of Water, Sanitation and Fencing  Fofza Primary School</b></p>		R	

Brought Forward		R
<p><b><u>0,6 mm "Klip-Lok 406" or similar approved light industrial Z275 spelter galvanised steel sheeting, with "Classicoat" finish one side and half coat "Classicoat Grey" other side, and accessories fixed to timber purlins or rails at approximately 1500mm centres:</u></b></p>		
1	Roof coverings with pitch not exceeding 25 degrees	m2 79
<p><b><u>Accessories:</u></b></p>		
2	Apex flashings 462mm girth	m 16
<p><b><u>ROOF AND WALL INSULATION</u></b></p>		
<p><b><u>"Sisalation 405" or similar approved residential grade aluminium foil based insulation:</u></b></p>		
3	Insulation sheeting laid taut over purlins at approximately 1000mm centres and fixed concurrent with roof covering with minimum 150mm stapled laps, including galvanised steel straining wires at not exceeding 400mm centres and double-sided tape at edges where required	m2 79
<p><b>Carried Forward to Summary of Section No. 7</b></p>		
<p>Section No. 7  M6 + 5UR and M4 +4UR Male Ablutions  Bill No. 5  ROOF COVERINGS  <b>Construction of Water, Sanitation and Fencing  Fofza Primary School</b></p>		
		R

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 7</u></b></p>			
<p><b><u>BILL NO.6</u></b></p>			
<p><b><u>CARPENTRY AND JOINERY</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Fixing:</u></b></p>			
<p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete</p>			
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given separately elsewhere</p>			
<p><b><u>Joinery:</u></b></p>			
<p>Descriptions of frames shall be deemed to include frames, transoms, rails, etc</p>			
<p>Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 7 M6 + 5UR and M4 +4UR Male Ablutions Bill No. 6 CARPENTRY AND JOINERY <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>			
		R	

**Brought Forward**

R

**Particle board**

All particle board shall comply with SANS 50312 having the required marking as per SANS 50312/EN 312

**Decorative thermosetting plastic laminate covering:**

Laminate covering shall be glued under pressure and edge strips of same shall be butt jointed at junctions with adjacent similar finish

**Sizes:**

Sizes are nominal and the Contractor shall make allowance in his prices for minor variances in stated finished sizes of timber doors, door members, door frames, architraves, etc

**Prices**

Prices for all joinery work are to include for general framing, housing and notching, arris rounded angles, glueing, blocking, planting on, screwing, adhesives, dowels, pellets, cross tongues, screws and nails and setting up complete and also for all square cutting and waste. Tops shall be secured with metal or hardwood buttons.

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**ROOFS, ETC**

**Sawn softwood grade 5:**

1	38 x 114mm Wall plates bolted	m	18
2	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	58
3	50 x 76mm Purlins	m	60

**EAVES, VERGES, ETC**

**Carried Forward**

R

Section No. 7  
M6 + 5UR and M4 +4UR Male Ablutions  
Bill No. 6  
CARPENTRY AND JOINERY  
**Construction of Water, Sanitation and Fencing**  
**Fofza Primary School**

<b>Brought Forward</b>		R
<b><u>Medium density plain fibre-cement fascias and barge boards:</u></b>		
4	19 x 235mm Fascias and barge boards, including aluminium H-profile jointing strips	36
	m	
<b><u>DOORS, ETC</u></b>		
<b><u>Wrought meranti doors hung to steel frames:</u></b>		
5	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding including 150mm undercut (D2)	10
	No	
6	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	2
	No	
<b>Carried Forward to Summary of Section No. 7</b>		
Section No. 7		
M6 + 5UR and M4 +4UR Male Ablutions		
Bill No. 6		
CARPENTRY AND JOINERY		
<b>Construction of Water, Sanitation and Fencing</b>		
<b>Fofoza Primary School</b>		
		R

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 7</u></b></p>			
<p><b><u>BILL NO.7</u></b></p>			
<p><b><u>IRONMONGERY</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Proprietary items:</u></b></p>			
<p>Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items</p>			
<p>Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.</p>			
<p>Prices are to be based on the specific products/articles specified.</p>			
<p>On request, returnable samples are to be provided to the Project Manager for consideration</p>			
<p><b><u>Locks:</u></b></p>			
<p>Notwithstanding Clause 2, Item 3 of the "Ironmongery" trade of the Standard System (7th Edition, 2015) of Measuring Building Wor, descriptions of locks shall be deemed to include two keys per lock</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 7 M6 + 5UR and M4 +4UR Male Ablutions Bill No. 7 IRONMONGERY <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

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**Finishes to ironmongery:**

Where applicable, finishes to ironmongery are indicated by suffixes in accordance with the following list:

- BS Satin bronze lacquered
- CH Chromium plated
- SC Satin chromium plated
- SE Silver enamelled
- GE Grey enamelled
- AN Anodised natural
- AS Anodised silver
- AB Anodised bronze
- AG Anodised gold
- ABL Anodised black
- PB Polished brass
- PL Polished and lacquered
- PT Epoxy coated
- SD Sanded
- BBS Brushed stainless steel

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**CATCHES, CABIN HOOKS, ETC**

1	150mm Cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	10
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**LOCKS**

**"Union Assa Abloy" or similar approved:**

2	50mm Brass padlock	No	2
3	Four lever lockset	No	2
4	"Ref. CZ80941SC" Indicator bolt	No	10

**HANDLES**

**"Union Assa Abloy" or similar approved:**

5	ASSA ABLOY Anodised Silver straight pull handle (Code: AL5515-300BBAS) with 300mm fixing centres	Pairs	2.0
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**Carried Forward**

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Section No. 7  
M6 + 5UR and M4 +4UR Male Ablutions  
Bill No. 7  
IRONMONGERY  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

Brought Forward		R
<b><u>PUSH PLATES AND KICK PLATES</u></b>		
<b><u>"Union Assa Abloy" or similar approved:</u></b>		
<b><u>1.2mm Thick satin finished "Union" stainless steel plates countersunk screwed along edges at not exceeding 200mm centres</u></b>		
6	200 x 800mm Type "SS5089-200W" kicking plate	20
	No	
<b><u>LETTERS, NAMEPLATES, ETC</u></b>		
<b><u>"Dorma" or similar approved:</u></b>		
7	DSS-130 Engraved "Male" information sign	2
	No	
<b><u>SUNDRIES</u></b>		
8	25mm Diameter wall mounted door stop plugged	12
	No	
<b><u>BATHROOM FITTINGS</u></b>		
<b><u>"Kimberley-Clark" or similar approved:</u></b>		
9	"Ref. SQ2 code 405607B" white lockable toilet roll holder	10
	No	
<b>Carried Forward to Summary of Section No. 7</b>		
Section No. 7		
M6 + 5UR and M4 +4UR Male Ablutions		
Bill No. 7		
IRONMONGERY		
<b>Construction of Water, Sanitation and Fencing</b>		
<b>Fofoza Primary School</b>		
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Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 7</u></b></p>			
<p><b><u>BILL NO.8</u></b></p>			
<p><b><u>METALWORK</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Descriptions of bolts, anchors, etc:</u></b></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>Items described as "holed for bolt(s)" shall be deemed to exclude the bolts, unless otherwise described</p>			
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 7  M6 + 5UR and M4 +4UR Male Ablutions  Bill No. 8  METALWORK  <b>Construction of Water, Sanitation and Fencing  Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Fixing:**

Unless otherwise described, descriptions of items shall be deemed to include for fixing to brickwork or concrete

Where items are described as "bolted", the bolts are measured elsewhere as stated in clause N.7 of the Model Preambles

**References:**

References in descriptions of windows, doors, gates, etc refer to the respective types of windows, doors, etc detailed in the Architect's window schedules numbered

- 21111/FSPS/S005
- T-2003
- T-2004
- T-2005

and bound into the back of these bills of quantities

Tenderers are to price the following items in conjunction with the above Architect's drawings, etc and no claim arising from brevity of descriptions in these bills of quantities, of items shown on the Architect's drawings, etc shall be entertained

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**Carried Forward**

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Section No. 7  
 M6 + 5UR and M4 +4UR Male Ablutions  
 Bill No. 8  
 METALWORK  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

<b>Brought Forward</b>		R
<b><u>STEEL GATES, SCREENS, ETC</u></b>		
<b><u>Welded screens and gates, to brickwalls:</u></b>		
1	Single gate and frame size to fit standard door, size 813 x 2032mm high	No 2
<b><u>PRESSED STEEL DOOR FRAMES</u></b>		
<b><u>1,6mm Double rebated frames suitable for half brick walls:</u></b>		
2	Frame for door size 813 x 2032mm high	No 10
<b><u>1,6mm Double rebated frames suitable for one brick walls:</u></b>		
3	Frame for door size 813 x 2032mm high	No 2
<b><u>STEEL WINDOWS, DOORS, ETC</u></b>		
<b><u>Standard windows:</u></b>		
4	Window type NE1, 533 x 654mm high (N1)	No 14
5	Window type NE7, 1022 x 654mm high (N2)	No 7
<b>Carried Forward to Summary of Section No. 7</b>		
Section No. 7		
M6 + 5UR and M4 +4UR Male Ablutions		
Bill No. 8		
METALWORK		
<b>Construction of Water, Sanitation and Fencing</b>		
<b>Fofza Primary School</b>		
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Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 7</u></b></p> <p><b><u>BILL NO.9</u></b></p> <p><b><u>PLASTERING</u></b></p> <p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Moisture tests:</u></b></p> <p>Before any finishes, coverings, etc are applied to screeds, plastering, etc or any other in-situ finish, moisture tests are to be carried out to the complete satisfaction of the Project Manager to ensure that these surfaces have the correct moisture content for the finish to be applied</p> <p><b><u>Labours, etc</u></b></p> <p>Labours such as fair, rounded and chamfered edges, trowel cuts, throats, V-joints, angles, etc shall be deemed to be included in the descriptions</p>			
<p><b>Carried Forward</b></p>		R	
<p>Section No. 7  M6 + 5UR and M4 +4UR Male Ablutions  Bill No. 9  PLASTERING  <b>Construction of Water, Sanitation and Fencing  Fofza Primary School</b></p>			

**Brought Forward**

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**Sample Panels**

A sample panel size 1m x1m, of each of the various plaster type wall and floor finishes in this contract, shall be prepared for the approval of the Project Manager and the cost of the sample panel(s) shall be deemed to be included in the overall costs of the relevant wall and floor finishes

**GRANOLITHIC****Method:**

The method to be used shall be either the monolithic method or the bonded method

**Preparation:**

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

**Mix:**

Unless otherwise described, granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SANS 1083 and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the size of the coarse aggregate shall be increased to the maximum size compatible with the thickness of the granolithic

**Carried Forward**

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Section No. 7  
M6 + 5UR and M4 +4UR Male Ablutions  
Bill No. 9  
PLASTERING  
**Construction of Water, Sanitation and Fencing  
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**Brought Forward**

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**Panels:**

Granolithic shall be laid in panels not exceeding 14m<sup>2</sup> for monolithic finishes, not exceeding 9,5m<sup>2</sup> for bonded finishes and not exceeding 6m<sup>2</sup> for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1,5 times its width

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

**Laying:**

Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels

Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels

After wood floating, the monolithic and bonded granolithic shall remain undisturbed until bleeding has ceased and the surface has stiffened. Any remaining bleed water and laitance shall then be removed and the surface steel trowelled or power floated

**Curing, seasoning and protection:**

Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying

**Colour:**

Coloured granolithic shall be tinted with an approved colouring pigment mixed into a true and even colour

**Carried Forward**

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Section No. 7  
M6 + 5UR and M4 +4UR Male Ablutions  
Bill No. 9  
PLASTERING

**Construction of Water, Sanitation and Fencing  
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**TINTED WHITE CEMENT SCREEDS**

Tinted screed shall be composed of one bag White Portland Cement and two wheelbarrows "Malmesbury" sand. Surfaces shall be finished with a steel trowel to leave a smooth finish and coated with two coats "Earthcote S.I. Floorcote" two-pack polyurethane floor sealer applied as per the manufacturer's recommendations

NOTE: Tinted screeds are to be strengthened with "Primal Eccos" acrylic polymer (15% of the water volume is to be substituted with the acrylic polymer during the mixing process)

Coarse sand is to be used for these screeds

All tinting, finishing, strengthening, etc are to be mixed, applied, etc strictly in accordance with the manufacturer's instructions

**CEMENT PLASTER**

Unless otherwise described, cement plaster shall be taken to mean Class 1 cement plaster i.e. 1:4 cement:sand plaster (common cement)

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**GRANOLITHIC****Untinted granolithic, on concrete:**

1	30mm Thick on floors and landings	m2	40
2	Skirtings 150mm high	m	86

**SPECIAL FLOOR COATING**

**Prepare all surfaces as necessary, prime with "Flowprime" primer and apply 6mm thick anti-slip "Flowcrete Flowfresh HF" or similar approved heavy duty chemical resistant antimicrobial treated polyurethane resin floor screed of approved colour and applied by an approved specialist, on:**

3	On internal plastered walls	m2	84
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**Carried Forward**

R

Section No. 7  
M6 + 5UR and M4 +4UR Male Ablutions  
Bill No. 9  
PLASTERING  
**Construction of Water, Sanitation and Fencing  
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Brought Forward

R

**INTERNAL PLASTER**

**Cement plaster steel trowelled, on brickwork:**

4	On walls	m2	84	
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**Carried Forward to Summary of Section No. 7**

Section No. 7  
 M6 + 5UR and M4 +4UR Male Ablutions  
 Bill No. 9  
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Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 7</u></b></p>			
<p><b><u>BILL NO.10</u></b></p>			
<p><b><u>PLUMBING AND DRAINAGE (PROVISIONAL)</u></b></p>			
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<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Wire gratings:</u></b></p>			
<p>Descriptions of gutter outlets, etc shall be deemed to include wire balloon gratings</p>			
<p><b><u>Stormwater channels:</u></b></p>			
<p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc and disposal of surplus material on site</p>			
<p><b><u>French drains:</u></b></p>			
<p>Descriptions of french drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, approved geofabric filter blanket over stone, 300mm earthfilling over and disposal of surplus material on site</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 7 M6 + 5UR and M4 +4UR Male Ablutions Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Septic tanks:**

Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site

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

Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)

Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)

Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)

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

**Sealing of edges:**

Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved mildew resistant silicone sealant and prices must include therefor

**uPVC pipes and fittings:**

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

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

**Carried Forward**

R

Section No. 7  
 M6 + 5UR and M4 +4UR Male Ablutions  
 Bill No. 10  
 PLUMBING AND DRAINAGE  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

**Brought Forward**

R

**uPVC pressure pipes and fittings:**

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

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

**High density polyethylene (HDPe) pipes and fittings:**

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

**"Polycop" polypropylene pipes:**

Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings

Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions

**Copper pipes:**

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

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

**Carried Forward**

R

Section No. 7

M6 + 5UR and M4 +4UR Male Ablutions

Bill No. 10

PLUMBING AND DRAINAGE

**Construction of Water, Sanitation and Fencing  
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**Brought Forward**

R

**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 claims for extra bushes, reducers, etc will be entertained

**Fixing of pipes:**

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

**Paper wrapping to pipes:**

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

**Disinfection of water pipework:**

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

**"Densyl" petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd.:**

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with suitable overlaps

Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, "Layflat" sheeting, securing of same, etc

Prices for wrapping of pipes shall include for all work as described to couplings in the length

**Carried Forward**

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Section No. 7  
M6 + 5UR and M4 +4UR Male Ablutions  
Bill No. 10  
PLUMBING AND DRAINAGE  
**Construction of Water, Sanitation and Fencing  
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**Brought Forward**

R

**Laying, backfilling, bedding, etc of pipes:**

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

Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following:

- SANS 1200L : Medium-pressure pipelines
- SANS 1200LD : Sewers
- SANS 1200LE : Stormwater drainage

Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200DB : Earthworks (Pipe trenches)

Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200LB : Bedding (Pipes)

Unless otherwise described, bedding of rigid pipes shall be Class B bedding

**General:**

Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc are given separately)

Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 98% Mod AASHTO density and disposal of surplus material on site

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

**Carried Forward**

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Section No. 7  
 M6 + 5UR and M4 +4UR Male Ablutions  
 Bill No. 10  
 PLUMBING AND DRAINAGE  
**Construction of Water, Sanitation and Fencing  
 Fofeza Primary School**

**Brought Forward**

R

Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured) and shall have straight or side outlets and "P" or "S" traps as necessary

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

**As-built drawings:**

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

**Proprietary items:**

Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items

Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.

Prices are to be based on the specific products/articles specified.

On request, returnable samples are to be provided to the Project Manager for consideration

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**RAINWATER DISPOSAL**

**0,6mm Galvanised sheet steel gutters and rainwater pipes with powder coated finish on outside to match roof sheeting colour:**

1	150 x150mm Box gutters	m	16
2	100 x 75mm Rainwater pipes	m	5
3	Extra over gutter for stopped end	No	4

**Carried Forward**

R

Section No. 7  
 M6 + 5UR and M4 +4UR Male Ablutions  
 Bill No. 10  
 PLUMBING AND DRAINAGE  
**Construction of Water, Sanitation and Fencing  
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<b>Brought Forward</b>			R
4	Extra over gutter for outlet for 100 x 75mm pipe	No	4
5	Extra over rainwater pipe for bend	No	4
6	Extra over rainwater pipe for shoe	No	4
7	Extra over rainwater pipe for eaves or plinth offset	No	4
<b>Carried Forward</b>			R
Section No. 7 M6 + 5UR and M4 +4UR Male Ablutions Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b>			

<b>Brought Forward</b>		R
<b><u>SANITARY FITTINGS</u></b>		
<b><u>Supply and install "Enviroloo systems" or similar approved:</u></b>		
8	"Enviro Loo System FG-1040 STDCA/A Standard" strictly in accordance with manufacturers instructions, unit comprising of top unit and two x louvered inlets (PL.1), drying plate (PL.2), two x air inlets (PL.3), toilet pan, seat and lid (PL.4), 3500mm long outlet vent pipe (PL.5), ventilation extraction unit (PL.6) fixed to wall with vent wall bracket (PL.7), 1 bag mounting screws and organic starter, enzyme and toilet cleaner (PL.8) including all necessary interconnector piping between multiple tanks, emergency outlet piping, etc	No 10
9	"Enviro Loo 2 Pan Urinal Evaporative Tank System code FG-862B " strictly in accordance with manufacturers instructions, unit comprising of urinal evaporative tank (PL.1), urinal bowl (PL.5), 3500mm long outlet vent pipe (PL.3), ventilation extraction unit (PL.3) fixed to wall with vent wall bracket (PL.4), 1 bag mounting screws and organic starter, enzyme and toilet cleaner (PL.8) including all necessary piping, traps, etc	No 1
10	"Enviro Loo 3 Pan Urinal Evaporative Tank System code FG-862B " strictly in accordance with manufacturers instructions, unit comprising of urinal evaporative tank (PL.1), urinal bowl (PL.5), 3500mm long outlet vent pipe (PL.3), ventilation extraction unit (PL.3) fixed to wall with vent wall bracket (PL.4), 1 bag mounting screws and organic starter, enzyme and toilet cleaner (PL.8) including all necessary piping, traps, etc	No 1
11	"Enviro Loo 4 Pan Urinal Evaporative Tank System code FG-862B " strictly in accordance with manufacturers instructions, unit comprising of urinal evaporative tank (PL.1), urinal bowl (PL.5), 3500mm long outlet vent pipe (PL.3), ventilation extraction unit (PL.3) fixed to wall with vent wall bracket (PL.4), 1 bag mounting screws and organic starter, enzyme and toilet cleaner (PL.8) including all necessary piping, traps, etc	No 1
<b>Carried Forward</b>		R
Section No. 7 M6 + 5UR and M4 +4UR Male Ablutions Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing                      Fofza Primary School</b>		

<b>Brought Forward</b>		R
<b><u>Precast concrete wash trough:</u></b>		
12	Standard SABS approved Pre-Cast Concrete Double Wash Trough, 1080 x 650 x 850mm high with support legs fitted with standard 3/4 Brass Garden Taps, including all necessary pipework including soak away approximately 10 meters away from the wash trough, sized at 1000 x 1000 x 1000mm covered with "bidim" complete etc	No 3
<b><u>BUDGETARY ALLOWANCES</u></b>		
<b><u>SUPERVISION OF INSTALLATION OF "ENVIRO LOO":</u></b>		
13	Two site visits to be made by the "enviroo loo" suppliers to assist/support the contractor in the installation of the "enviro loo" and a final inspection to be ascertain the enviro loo has been installed correctly at which time a Certificate of Compliance should be issued between Mvula Trust and Enviro Loo Options Limpopo.	Item
14	Profit and attendance for the above	Item
<b><u>TRAPS, ETC</u></b>		
<b><u>uPVC:</u></b>		
15	40 x 40mm Double bowl wash trough or sink reseal "P" or "S" trap combination	No 3
<b><u>TAPS, VALVES, ETC</u></b>		
<b><u>"Cobra Watertech" or similar approved:</u></b>		
16	19mm chrome plated push button taps to wash troughs	No 6
17	15mm Code 232/350 FCP angle regulating valve and flexible connection pipe	No 6
<b><u>SANITARY PLUMBING</u></b>		
<b>Carried Forward</b>		R
Section No. 7 M6 + 5UR and M4 +4UR Male Ablutions Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing                      Fofza Primary School</b>		

Brought Forward			R
<b><u>uPVC pipes:</u></b>			
18	50mm Pipes	m	6
19	50mm Diameter pipe laid in and including trenches not exceeding 1m deep	m	6
<b><u>Extra over uPVC pipes for fittings:</u></b>			
20	50mm Bend	No	3
21	50mm Junction	No	3
22	110mm Bend	No	3
23	110mm Junction	No	3
<b><u>WATER SUPPLIES</u></b>			
<b><u>Class 1 copper pipes with capillary couplings:</u></b>			
24	15mm Pipe fixed to walls, in chases, etc	m	15
25	Ditto, but 22mm diameter	m	30
<b><u>Extra over Class 1 copper pipes for capillary fittings:</u></b>			
26	15mm Fittings	No	6
27	22mm Fittings	No	12
<b>Carried Forward to Summary of Section No. 7</b>			R
Section No. 7			
M6 + 5UR and M4 +4UR Male Ablutions			
Bill No. 10			
PLUMBING AND DRAINAGE			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofza Primary School</b>			

Item No	<b><u>SECTION NO. 7</u></b>	Quantity	Rate	Amount
	<b><u>BILL NO.11</u></b>			
	<b><u>GLAZING</u></b>			
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	<b><u>PREAMBLES</u></b>			
	<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	<b><u>Float glass:</u></b>			
	<p>The term "float glass" is used for monolithic annealed glass</p>			
	<b><u>Laminated glass:</u></b>			
	<p>Laminated glass to have polyvinyl butyral (PVB) interlayer(s)</p>			
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	<b><u>GLAZING TO STEEL WITH PUTTY</u></b>			
	<b><u>6,38mm Obscure safety glass:</u></b>			
1	Panes not exceeding 0,1m <sup>2</sup>	m2	9	
	<b>Carried Forward to Summary of Section No. 7</b>			R
	<p>Section No. 7  M6 + 5UR and M4 +4UR Male Ablutions  Bill No. 11  GLAZING  <b>Construction of Water, Sanitation and Fencing  Fofza Primary School</b></p>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 7</u></b></p>			
<p><b><u>BILL NO.12</u></b></p>			
<p><b><u>PAINTWORK</u></b></p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>PREPARATORY WORK TO EXISTING WORK</u></b></p>			
<p><b><u>Previously painted plastered surfaces:</u></b></p>			
<p>Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and minor cracks shall be opened, filled with a suitable filler and finished smooth</p>			
<p><b><u>Previously painted metal surfaces:</u></b></p>			
<p>Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 7  M6 + 5UR and M4 +4UR Male Ablutions  Bill No. 12  PAINTWORK  <b>Construction of Water, Sanitation and Fencing  Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Previously painted wood surfaces:**

Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth

**PAINT SPECIFICATIONS**

All painting shall be done in accordance with "Plascon", etc specifications, unless otherwise described

**COLOURS**

When staining timber, the resultant colour or shade must be to the complete satisfaction of the Project Manager before any overcoating or preservative is applied

Paintwork is classified in the following different colour groups: "White", "Pastel", "Deep" and "Transparent" in accordance with the "Natural Colour System" (NCS) adopted by the SA National Standards  
Unless otherwise described, all paintwork shall be deemed to be classified in the "White" colour group

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**PAINTWORK, ETC TO NEW WORK**

**ON FIBRE-CEMENT BOARD SURFACES**

**One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use, on:**

1	Fascias and barge boards, including priming metal jointing strips	m2	9
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**METAL SURFACES WITH**

**One coat alkyd based zinc phosphate primer and two coats premium quality polyurethane enamel paint, on steel:**

2	Door frames	m2	22
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**Carried Forward**

R

Section No. 7  
M6 + 5UR and M4 +4UR Male Ablutions  
Bill No. 12  
PAINTWORK  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

<b>Brought Forward</b>			R
3	Windows	m2	19
4	Gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	7
5	Extra over for paintwork in the "Deep" colour group	m2	48
<b><u>ON WOOD SURFACES</u></b>			
<b><u>One coat primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on:</u></b>			
6	Doors	m2	43
7	Roof timbers at eaves and verges	m2	38
8	Extra over for paintwork in the "Deep" colour group	m2	81
<b>Carried Forward to Summary of Section No. 7</b>			R
Section No. 7			
M6 + 5UR and M4 +4UR Male Ablutions			
Bill No. 12			
PAINTWORK			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofzo Primary School</b>			

Bill No	SECTION SUMMARY - M6 + 5UR and M4 +4UR Male Ablutions	Page No	Amount
1	EARTHWORKS	224	
2	CONCRETE, FORMWORK AND REINFORCEMENT	228	
3	MASONRY	231	
4	WATERPROOFING	233	
5	ROOF COVERINGS	235	
6	CARPENTRY AND JOINERY	238	
7	IRONMONGERY	241	
8	METALWORK	244	
9	PLASTERING	249	
10	PLUMBING AND DRAINAGE	259	
11	GLAZING	260	
12	PAINTWORK	263	
<b>Carried to Final Summary</b>			R
Section No. 7 M6 + 5UR and M4 +4UR Male Ablutions <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 8</u></b></p>			
<p><b><u>BILL NO.1</u></b></p>			
<p><b><u>EARTHWORKS (PROVISIONAL)</u></b></p> <p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be included in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Nature of ground</u></b></p>			
<p>The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "hard rock" or "soft rock".</p>			
<p>The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock".</p>			
<p>The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, therefore "earth", but possibly interspersed with "hard rock".</p>			
<p>Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth". The trial holes also indicate that the water table is at a maximum depth of approximately 1000mm.</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 8 GR10 + SD1 Grade R Unisex Bill No. 1 EARTHWORKS <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured

**Subterranean water:**

No subterranean water is expected

Should the Contractor however, encounter any subterranean water on the site, he shall immediately notify the Principal Agent thereof and submit recommendations for keeping the works free from subterranean water together with all costs involved therewith

**Excavation for working space in rock:**

Notwithstanding clause 10 measurement rule 27 of the Standard System of Measuring Building Work, excavation for working space in material of a more different character (e.g. soft or hard rock) will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be

**Carting away of excavated material**

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

**Filling**

Notwithstanding the reference to prescribed multiple handling in clause 1 page 10 of the Standard System (7th Edition, 2015) of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material

**Carried Forward**

Section No. 8  
 GR10 + SD1 Grade R Unisex  
 Bill No. 1  
 EARTHWORKS  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

R

R

Brought Forward			R
<b><u>Testing:</u></b>			
<i>Prices for backfilling to trenches and holes only are to include for all necessary density tests in accordance with SANS 1200D</i>			
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<b><u>EXCAVATIONS, FILLING, ETC</u></b>			
<b><u>EXCAVATIONS, ETC</u></b>			
<b><u>Excavation in earth not exceeding 2m deep:</u></b>			
1	Reduced levels under floors	m3	5
2	Trenches	m3	14
3	Trenches and holes for thickening under surface beds, etc	m3	5
<b><u>Extra over trench and hole excavations in earth for excavation in:</u></b>			
4	Soft rock	m3	1
5	Hard rock	m3	1
<b><u>Extra over all excavations for carting away:</u></b>			
6	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	19
<b><u>Risk of collapse of excavations:</u></b>			
7	Sides of trench and hole excavations not exceeding 1,5m deep	m2	39
<b><u>Keeping excavations free of water:</u></b>			
8	Keeping excavations free of all water other than subterranean water		Item
<b><u>FILLING ETC</u></b>			
Carried Forward			R
Section No. 8 GR10 + SD1 Grade R Unisex Bill No. 1 EARTHWORKS <b>Construction of Water, Sanitation and Fencing                      Fofza Primary School</b>			

Brought Forward			R
<b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:</u></b>			
9	Backfilling to trenches, holes, etc	m3	5
<b><u>G5 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:</u></b>			
10	Under floors, steps, pavings, etc	m3	5
<b><u>Compaction of surfaces:</u></b>			
11	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 91% Mod AASHTO density	m2	51
<b><u>Prescribed density tests on filling:</u></b>			
12	"Modified AASHTO Density" test	No	18
<b><u>SOIL POISONING</u></b>			
<b><u>Soil insecticide in accordance with SANS 5859:</u></b>			
13	Soil insecticide (protection against termites) applied as specified under floors, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	51
14	To bottoms and sides of trenches, etc	m2	62
<b>Carried Forward to Summary of Section No. 8</b>			R
Section No. 8			
GR10 + SD1 Grade R Unisex			
Bill No. 1			
EARTHWORKS			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 8</u></b></p>			
<p><b><u>BILL NO.2</u></b></p>			
<p><b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b></p>			
-----			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Cost of tests:</u></b></p>			
<p><b><u>Breeze concrete:</u></b></p>			
<p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated</p>			
<p><b><u>Lightweight concrete:</u></b></p>			
<p>Lightweight concrete shall have a density of 600kg/m<sup>3</sup> for the top 50mm and 400kg/m<sup>3</sup> for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 8 GR10 + SD1 Grade R Unisex Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Waterproof concrete:**

"Waterproof concrete" shall have the same properties as normal concrete, but the following shall be modified to make the the concrete more water-tight:

1. a cement/water ratio of minimum 1.9 and maximum 2.1
2. minimum OPC content of 300kg/m<sup>3</sup>
3. Polypropolene micro fibres added to concrete at rate of 182 million per m<sup>3</sup>

**Formwork:**

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

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 soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described

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**UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**15MPa/19mm concrete:**

1	Surface blinding under footings and bases	m3	2
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**REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES**

**Carried Forward**

R

Section No. 8  
 GR10 + SD1 Grade R Unisex  
 Bill No. 2  
 CONCRETE, FORMWORK AND REINFORCEMENT  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

<b>Brought Forward</b>			R
<b><u>30MPa/19mm concrete:</u></b>			
	Strip footings	m3	5
	Surface beds on waterproofing	m3	8
<b><u>TEST BLOCKS</u></b>			
2	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	4
<b><u>CONCRETE SUNDRIES</u></b>			
<b><u>Finishing top surfaces of concrete smooth with a steel trowel:</u></b>			
3	Surface beds, slabs, etc	m2	35
<b><u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u></b>			
<b><u>Rough formwork to sides:</u></b>			
4	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	65
<b><u>MOVEMENT JOINTS, ETC</u></b>			
<b><u>Expansion joints with 10mm softboard between vertical concrete and brick surfaces:</u></b>			
5	Not exceeding 300mm high to edges of surface beds	m	85
<b><u>Saw-cut joints:</u></b>			
6	6 x 10mm Saw-cut joints in top of concrete	m	102
<b><u>REINFORCEMENT (PROVISIONAL)</u></b>			
<b><u>Mild steel reinforcement to structural concrete work:</u></b>			
7	Mild steel bar reinforcement (8 to 40mm diameter bars)	t	0.13
<b>Carried Forward</b>			R
Section No. 8 GR10 + SD1 Grade R Unisex Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

<b>Brought Forward</b>			R
<b><u>High tensile steel reinforcement to structural concrete work:</u></b>			
8	High tensile steel bar reinforcement (8 to 40mm diameter bars)	t	0.30
<b><u>Fabric reinforcement:</u></b>			
9	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	35
<b>Carried Forward to Summary of Section No. 8</b>			R
Section No. 8 GR10 + SD1 Grade R Unisex Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT <b>Construction of Water, Sanitation and Fencing</b> <b>Fofzo Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 8</u></b></p> <p><b><u>BILL NO.3</u></b></p> <p><b><u>MASONRY</u></b></p> <p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>BRICKWORK</u></b></p> <p><b><u>General:</u></b></p> <p>Non-load bearing brickwork is to be built to full height less 20mm gap next to the ceiling and is to be left for 14 days before grouting up in 1:3 cement mortar.</p> <p><b><u>Sizes in descriptions:</u></b></p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p><b><u>Hollow walls:</u></b></p> <p>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</p>			
<p><b>Carried Forward</b></p>		R	
<p>Section No. 8            GR10 + SD1 Grade R Unisex            Bill No. 3            MASONRY  <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b></p>			

**Brought Forward**

R

**Bagged and sealed walls:**

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 bitumen emulsion waterproofing coating

**Face bricks :**

Bricks shall be ordered timeously to obtain uniformity in size and colour

All face brickwork shall be regularly cleaned down as the work proceeds and shall be protected as necessary by an approved method

**Pointing:**

Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include smooth floated square recessed, hollow recessed, weathered pointing, etc

**FOUNDATIONS (PROVISIONAL)****Brickwork of NFP bricks (14 MPa nominal compressive strength) in class 1 mortar:**

1	One brick walls	m2	16
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**2,5mm Brickwork reinforcement:**

2	150mm Wide reinforcement built in horizontally	m	192
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**FACE BRICKWORK****Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints**

3	Extra over brickwork for face brickwork	m2	6
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**SUPERSTRUCTURE****Carried Forward**

R

Section No. 8

GR10 + SD1 Grade R Unisex

Bill No. 3

MASONRY

**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

Brought Forward			R
<b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar in loadbearing walls etc:</u></b>			
4	One brick walls	m2	92
<b><u>BRICKWORK SUNDRIES</u></b>			
<b><u>Joint forming material in movement joints:</u></b>			
5	12mm Fibre board built in vertically through brick walls	m	83
<b><u>2,5mm Brickwork reinforcement:</u></b>			
6	75mm Wide reinforcement built in horizontally	m	191
7	150mm Wide reinforcement built in horizontally	m	304
<b><u>Prestressed fabricated concrete lintels, including necessary temporary supports:</u></b>			
8	110 x 75mm Lintels in lengths not exceeding 3m long	m	50
<b><u>FACE BRICKWORK</u></b>			
<b><u>Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u></b>			
9	Half brick wall faced on both sides	m2	48
10	Extra over brickwork for face brickwork	m2	150
11	Extra over brickwork for brick-on-edge header course lintel pointed on face and 120mm soffit	m	14
12	Fair raking cutting	m	10
<b><u>Brick-on-edge header course coping, sills, etc. of face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with recessed joints on all exposed faces</u></b>			
13	150mm Wide sills set sloping and slightly projecting	m	12
<b>Carried Forward to Summary of Section No. 8</b>			R
Section No. 8			
GR10 + SD1 Grade R Unisex			
Bill No. 3			
MASONRY			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofoza Primary School</b>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 8</u></b></p> <p><b><u>BILL NO.4</u></b></p> <p><b><u>WATERPROOFING</u></b></p> <p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Waterproofing:</u></b></p> <p>Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets, etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs</p> <p>-----</p>			
<p><b>Carried Forward</b></p>		R	
<p>Section No. 8            GR10 + SD1 Grade R Unisex            Bill No. 4            WATERPROOFING  <b>Construction of Water, Sanitation and Fencing            Fofeza Primary School</b></p>			

Brought Forward

R

**DAMPPROOFING OF WALLS AND FLOORS**

**One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B):**

1	In walls	m2	94
2	In walls vertically at reveals	m2	7

**One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:**

3	Under surface beds	m2	42
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**JOINT SEALANTS ETC**

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

4	6 x 10mm In saw cut joints in floors	m	102
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**White silicone sealing compound including backing cord, bond breaker, primer, etc**

5	6 x 10mm In expansion joints in floors, including raking out expansion joint filler as necessary [ LI ]	m	85
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**Carried Forward to Summary of Section No. 8**

R

Section No. 8  
 GR10 + SD1 Grade R Unisex  
 Bill No. 4  
 WATERPROOFING  
**Construction of Water, Sanitation and Fencing  
 Fofza Primary School**

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 8</u></b></p>			
<p><b><u>BILL NO.5</u></b></p>			
<p><b><u>ROOF COVERINGS</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p>Profiled metal roof sheeting and accessories shall be supplied with a 10 year guarantee and be installed by an approved installer</p>			
<p>All fixing holes shall be drilled and not punched</p>			
<p>Roof covering accessories shall be manufactured from the same material as used for roof covering</p>			
<p>-----</p> <p><b><u>PROFILED METAL SHEETING AND ACCESSORIES</u></b></p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 8            GR10 + SD1 Grade R Unisex            Bill No. 5            ROOF COVERINGS  <b>Construction of Water, Sanitation and Fencing            Fofeza Primary School</b></p>		R	

Brought Forward		R
<p><b><u>0,6 mm "Klip-Lok 406" or similar approved light industrial Z275 spelter galvanised steel sheeting, with "Classicoat" finish one side and half coat "Classicoat Grey" other side, and accessories fixed to timber purlins or rails at approximately 1500mm centres:</u></b></p>		
1	Roof coverings with pitch not exceeding 25 degrees	m2 65
<p><b><u>Accessories:</u></b></p>		
2	Apex flashings 462mm girth	m 14
<p><b><u>ROOF AND WALL INSULATION</u></b></p>		
<p><b><u>"Sisalation 405" or similar approved residential grade aluminium foil based insulation:</u></b></p>		
3	Insulation sheeting laid taut over purlins at approximately 1000mm centres and fixed concurrent with roof covering with minimum 150mm stapled laps, including galvanised steel straining wires at not exceeding 400mm centres and double-sided tape at edges where required	m2 65
<p><b>Carried Forward to Summary of Section No. 8</b></p>		
<p>Section No. 8            GR10 + SD1 Grade R Unisex            Bill No. 5            ROOF COVERINGS  <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b></p>		
		R

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 8</u></b></p>			
<p><b><u>BILL NO.6</u></b></p>			
<p><b><u>CARPENTRY AND JOINERY</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Fixing:</u></b></p>			
<p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete</p>			
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given separately elsewhere</p>			
<p><b><u>Joinery:</u></b></p>			
<p>Descriptions of frames shall be deemed to include frames, transoms, rails, etc</p>			
<p>Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 8 GR10 + SD1 Grade R Unisex Bill No. 6 CARPENTRY AND JOINERY <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>			
		R	

**Brought Forward**

R

**Particle board**

All particle board shall comply with SANS 50312 having the required marking as per SANS 50312/EN 312

**Decorative thermosetting plastic laminate covering:**

Laminate covering shall be glued under pressure and edge strips of same shall be butt jointed at junctions with adjacent similar finish

**Sizes:**

Sizes are nominal and the Contractor shall make allowance in his prices for minor variances in stated finished sizes of timber doors, door members, door frames, architraves, etc

**Prices**

Prices for all joinery work are to include for general framing, housing and notching, arris rounded angles, glueing, blocking, planting on, screwing, adhesives, dowels, pellets, cross tongues, screws and nails and setting up complete and also for all square cutting and waste. Tops shall be secured with metal or hardwood buttons.

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**ROOFS, ETC**

**Sawn softwood grade 5:**

1	38 x 114mm Wall plates bolted	m	27
2	38 x 114mm Rafters in lengths exceeding 3,9m and not exceeding 6,6m	m	85
3	50 x 76mm Purlins	m	88

**EAVES, VERGES, ETC**

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<b>Brought Forward</b>		R
<b><u>Medium density plain fibre-cement fascias and barge boards:</u></b>		
4	19 x 235mm Fascias and barge boards, including aluminium H-profile jointing strips	23
	m	
<b><u>DOORS, ETC</u></b>		
<b><u>Wrought meranti doors hung to steel frames:</u></b>		
5	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding including 150mm undercut (D2)	10
	No	
6	44mm Framed batten door 813 x 2032mm high of 44 x 150mm top rail and stiles, 22 x 150mm middle ledge and braces and 22 x 220mm bottom rail filled in with 22mm V-jointed one side boarding and including weatherboard (D1)	2
	No	
<b>Carried Forward to Summary of Section No. 8</b>		
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<p><b><u>BILL NO.7</u></b></p>			
<p><b><u>IRONMONGERY</u></b></p>			
<p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Proprietary items:</u></b></p>			
<p>Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items</p>			
<p>Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.</p>			
<p>Prices are to be based on the specific products/articles specified.</p>			
<p>On request, returnable samples are to be provided to the Project Manager for consideration</p>			
<p><b><u>Locks:</u></b></p>			
<p>Notwithstanding Clause 2, Item 3 of the "Ironmongery" trade of the Standard System (7th Edition, 2015) of Measuring Building Wor, descriptions of locks shall be deemed to include two keys per lock</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 8 GR10 + SD1 Grade R Unisex Bill No. 7 IRONMONGERY <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Finishes to ironmongery:**

Where applicable, finishes to ironmongery are indicated by suffixes in accordance with the following list:

- BS Satin bronze lacquered
- CH Chromium plated
- SC Satin chromium plated
- SE Silver enamelled
- GE Grey enamelled
- AN Anodised natural
- AS Anodised silver
- AB Anodised bronze
- AG Anodised gold
- ABL Anodised black
- PB Polished brass
- PL Polished and lacquered
- PT Epoxy coated
- SD Sanded
- BBS Brushed stainless steel

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**CATCHES, CABIN HOOKS, ETC**

1	150mm Cabin hook and eye including 70 x 70 x 20mm chamfered hardwood block twice oiled and plugged	No	10
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**LOCKS**

**"Union Assa Abloy" or similar approved:**

2	50mm Brass padlock	No	2
3	Four lever lockset	No	2
4	"Ref. CZ80941SC" Indicator bolt	No	10

**HANDLES**

**"Union Assa Abloy" or similar approved:**

5	ASSA ABLOY Anodised Silver straight pull handle (Code: AL5515-300BBAS) with 300mm fixing centres	Pairs	2.0
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**Carried Forward**

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 IRONMONGERY

**Construction of Water, Sanitation and Fencing  
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**PUSH PLATES AND KICK PLATES**

**"Union Assa Abloy" or similar approved:**

**1.2mm Thick satin finished "Union" stainless steel plates countersunk screwed along edges at not exceeding 200mm centres**

6	200 x 800mm Type "SS5089-200W" kicking plate	No	24
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**DOOR CLOSERS**

**"Dorma" or similar approved:**

7	"Dorma" TS73N/EN3-4 parallel arm door closer delayed closing-push side fitting.	No	1
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**LETTERS, NAMEPLATES, ETC**

**"Dorma" or similar approved:**

8	DSS-131 Engraved "Female" information sign, plugged	No	2
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**SUNDRIES**

9	25mm Diameter wall mounted door stop plugged	No	12
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**BATHROOM FITTINGS**

**"Vaal Paragon" or similar approved**

10	32mm Type 9 back grab rail 800mm long plugged	No	1
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11	32mm Type 8 side grab rail 900mm girth plugged	No	1
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**Construction of Water, Sanitation and Fencing  
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<b>Brought Forward</b>			R
<b><u>"Kimberley-Clark" or similar approved:</u></b>			
12	"Ref. SQ2 code 405607B" white lockable toilet roll holder	No	11
13	Brushed stainless steel body, rust resistant, she bin, approximately 330 x 280 x 180mm etc	No	3
<b>Carried Forward to Summary of Section No. 8</b>			R
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<p><b><u>SECTION NO. 8</u></b></p>			
<p><b><u>BILL NO.8</u></b></p>			
<p><b><u>METALWORK</u></b></p>			
<p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Descriptions of bolts, anchors, etc:</u></b></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>Items described as "holed for bolt(s)" shall be deemed to exclude the bolts, unless otherwise described</p>			
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 8 GR10 + SD1 Grade R Unisex Bill No. 8 METALWORK <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

**Brought Forward**

R

**Fixing:**

Unless otherwise described, descriptions of items shall be deemed to include for fixing to brickwork or concrete

Where items are described as "bolted", the bolts are measured elsewhere as stated in clause N.7 of the Model Preambles

**References:**

References in descriptions of windows, doors, gates, etc refer to the respective types of windows, doors, etc detailed in the Architect's window schedules numbered

- 21111/FSPS/S005
- T-2003
- T-2004
- T-2005

and bound into the back of these bills of quantities

Tenderers are to price the following items in conjunction with the above Architect's drawings, etc and no claim arising from brevity of descriptions in these bills of quantities, of items shown on the Architect's drawings, etc shall be entertained

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 Bill No. 8  
 METALWORK

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<b>Brought Forward</b>		R
<b><u>STEEL GATES, SCREENS, ETC</u></b>		
<b><u>Welded screens and gates, to brickwalls:</u></b>		
1	Single gate and frame size to fit standard door, size 813 x 2032mm high	No 2
<b><u>PRESSED STEEL DOOR FRAMES</u></b>		
<b><u>1,6mm Double rebated frames suitable for half brick walls:</u></b>		
2	Frame for door size 813 x 2032mm high	No 10
<b><u>1,6mm Double rebated frames suitable for one brick walls:</u></b>		
3	Frame for door size 813 x 2032mm high	No 2
<b><u>STEEL WINDOWS, DOORS, ETC</u></b>		
<b><u>Standard windows:</u></b>		
4	Window type NE1, 533 x 654mm high (N1)	No 11
5	Window type NE7, 1022 x 654mm high (N2)	No 6
<b>Carried Forward to Summary of Section No. 8</b>		
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<p><b><u>BILL NO.9</u></b></p>			
<p><b><u>PLASTERING</u></b></p> <p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
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<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Moisture tests:</u></b></p>			
<p>Before any finishes, coverings, etc are applied to screeds, plastering, etc or any other in-situ finish, moisture tests are to be carried out to the complete satisfaction of the Project Manager to ensure that these surfaces have the correct moisture content for the finish to be applied</p>			
<p><b><u>Labours, etc</u></b></p>			
<p>Labours such as fair, rounded and chamfered edges, trowel cuts, throats, V-joints, angles, etc shall be deemed to be included in the descriptions</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 8 GR10 + SD1 Grade R Unisex Bill No. 9 PLASTERING <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

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**Sample Panels**

A sample panel size 1m x1m, of each of the various plaster type wall and floor finishes in this contract, shall be prepared for the approval of the Project Manager and the cost of the sample panel(s) shall be deemed to be included in the overall costs of the relevant wall and floor finishes

**GRANOLITHIC****Method:**

The method to be used shall be either the monolithic method or the bonded method

**Preparation:**

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

**Mix:**

Unless otherwise described, granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SANS 1083 and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the size of the coarse aggregate shall be increased to the maximum size compatible with the thickness of the granolithic

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**Panels:**

Granolithic shall be laid in panels not exceeding 14m<sup>2</sup> for monolithic finishes, not exceeding 9,5m<sup>2</sup> for bonded finishes and not exceeding 6m<sup>2</sup> for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1,5 times its width

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

**Laying:**

Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels

Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels

After wood floating, the monolithic and bonded granolithic shall remain undisturbed until bleeding has ceased and the surface has stiffened. Any remaining bleed water and laitance shall then be removed and the surface steel trowelled or power floated

**Curing, seasoning and protection:**

Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying

**Colour:**

Coloured granolithic shall be tinted with an approved colouring pigment mixed into a true and even colour

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**TINTED WHITE CEMENT SCREEDS**

Tinted screed shall be composed of one bag White Portland Cement and two wheelbarrows "Malmesbury" sand. Surfaces shall be finished with a steel trowel to leave a smooth finish and coated with two coats "Earthcote S.I. Floorcote" two-pack polyurethane floor sealer applied as per the manufacturer's recommendations

NOTE: Tinted screeds are to be strengthened with "Primal Eccos" acrylic polymer (15% of the water volume is to be substituted with the acrylic polymer during the mixing process)

Coarse sand is to be used for these screeds

All tinting, finishing, strengthening, etc are to be mixed, applied, etc strictly in accordance with the manufacturer's instructions

**CEMENT PLASTER**

Unless otherwise described, cement plaster shall be taken to mean Class 1 cement plaster i.e. 1:4 cement:sand plaster (common cement)

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**GRANOLITHIC**

**Untinted granolithic, on concrete:**

1	30mm Thick on floors and landings	m2	35
2	Skirtings 150mm high	m	85

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PLASTERING

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 Fofza Primary School**

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<p><b><u>SECTION NO. 8</u></b></p>			
<p><b><u>BILL NO.10</u></b></p>			
<p><b><u>PLUMBING AND DRAINAGE</u></b> <b><u>(PROVISIONAL)</u></b></p>			
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<p><b><u>PREAMBLES</u></b></p>			
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<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Wire gratings:</u></b></p>			
<p>Descriptions of gutter outlets, etc shall be deemed to include wire balloon gratings</p>			
<p><b><u>Stormwater channels:</u></b></p>			
<p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc and disposal of surplus material on site</p>			
<p><b><u>French drains:</u></b></p>			
<p>Descriptions of french drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, approved geofabric filter blanket over stone, 300mm earthfilling over and disposal of surplus material on site</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 8 GR10 + SD1 Grade R Unisex Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b></p>		R	

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**Septic tanks:**

Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site

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

Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)

Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)

Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)

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

**Sealing of edges:**

Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved mildew resistant silicone sealant and prices must include therefor

**uPVC pipes and fittings:**

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

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

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**uPVC pressure pipes and fittings:**

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

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

**High density polyethylene (HDPE) pipes and fittings:**

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

**"Polycop" polypropylene pipes:**

Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings

Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions

**Copper pipes:**

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

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

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**Reducing fittings:**

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm, only the largest end or branch 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 claims for extra bushes, reducers, etc will be entertained

**Fixing of pipes:**

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

**Paper wrapping to pipes:**

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

**Disinfection of water pipework:**

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

**"Densyl" petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd.:**

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with suitable overlaps

Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, "Layflat" sheeting, securing of same, etc

Prices for wrapping of pipes shall include for all work as described to couplings in the length

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**Laying, backfilling, bedding, etc of pipes:**

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

Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following:

- SANS 1200L : Medium-pressure pipelines
- SANS 1200LD : Sewers
- SANS 1200LE : Stormwater drainage

Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200DB : Earthworks (Pipe trenches)

Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200LB : Bedding (Pipes)

Unless otherwise described, bedding of rigid pipes shall be Class B bedding

**General:**

Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc are given separately)

Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 98% Mod AASHTO density and disposal of surplus material on site

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

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Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured) and shall have straight or side outlets and "P" or "S" traps as necessary

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

**As-built drawings:**

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

**Proprietary items:**

Where applicable, the manufacturers' names or product catalogue titles are given in sub-headings preceding the items

Note that the manufacturers names specified in this trade are for the purposes of competitive pricing.

Prices are to be based on the specific products/articles specified.

On request, returnable samples are to be provided to the Project Manager for consideration

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**RAINWATER DISPOSAL**

**0,6mm Galvanised sheet steel gutters and rainwater pipes with powder coated finish on outside to match roof sheeting colour:**

1	150 x150mm Box gutters	m	14
2	100 x 75mm Rainwater pipes	m	3
3	Extra over gutter for stopped end	No	2

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4	Extra over gutter for outlet for 100 x 75mm pipe	No	3
5	Extra over rainwater pipe for bend	No	3
6	Extra over rainwater pipe for shoe	No	3
7	Extra over rainwater pipe for eaves or plinth offset	No	3
<b>Carried Forward</b>			R
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<b><u>SANITARY FITTINGS</u></b>			
<b><u>"Vaal" or similar approved:</u></b>			
8	455 x 290mm "Hibiscus" 7050 wash hand basin bolted to wall	No	1
9	"Daisy Elite" 772403 close-coupled WC suite comprising pan with double flap heavy duty thermoset seat (Code: 8531Z0) and matching 9 litre cistern	No	10
10	"Pearl Paraplegic" 7300SC paraplegic WC suite with lid, fittings, purpose made CP side flush lever and purpose made double flap white epoxy painted wooden seat	No	1
<b><u>Precast concrete wash trough:</u></b>			
11	Standard SABS approved Pre-Cast Concrete Double Wash Trough, 1080 x 650 x 850mm high with support legs fitted with standard 3/4 Brass Garden Taps, including all necessary pipework including soak away approximately 10 meters away from the wash trough, sized at 1000 x 1000 x 1000mm covered with "bidim" complete etc	No	3
<b><u>TRAPS, ETC</u></b>			
<b><u>uPVC:</u></b>			
12	40 x 40mm Double bowl wash trough or sink reseal "P" or "S" trap combination	No	3
<b><u>"Cobra Watertech" or similar approved:</u></b>			
13	50mm Code 365 CP bottle trap	No	1
<b><u>TAPS, VALVES, ETC</u></b>			
<b><u>"Cobra Watertech" or similar approved:</u></b>			
14	19mm chrome plated push button taps to wash troughs	No	6
15	15mm Code 232/350 FCP angle regulating valve and flexible connection pipe	No	18
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Bill No. 10			
PLUMBING AND DRAINAGE			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofza Primary School</b>			

Brought Forward			R
16	15mm Code 503-21CP elbow action pillar tap	No	1
<b><u>SANITARY PLUMBING</u></b>			
<b><u>uPVC pipes:</u></b>			
17	50mm Pipes	m	20
18	110mm Pipes	m	11
19	50mm Diameter pipe laid in and including trenches not exceeding 1m deep	m	26
20	Ditto, but 110mm diameter	m	11
<b><u>Extra over uPVC pipes for fittings:</u></b>			
21	50mm Bend	No	8
22	50mm Junction	No	8
23	50mm Junction with cleaning eye and lid	No	8
24	110mm Straight pan connector	No	11
25	110mm Bend	No	22
26	110mm Junction	No	22
27	110mm Reducing junction	No	33
28	110mm Access bend	No	11
29	110mm Double junction	No	11
30	110mm "GI Two-way" vent valve	No	11
<b><u>Testing:</u></b>			
31	Testing waste pipe system		Item
<b><u>WATER SUPPLIES</u></b>			
Carried Forward			R
Section No. 8 GR10 + SD1 Grade R Unisex Bill No. 10 PLUMBING AND DRAINAGE <b>Construction of Water, Sanitation and Fencing</b> <b>Fofoza Primary School</b>			

Brought Forward			R
<b><u>Class 1 copper pipes with capillary couplings:</u></b>			
32	15mm Pipe fixed to walls, in chases, etc	m	45
33	Ditto, but 22mm diameter	m	75
<b><u>Extra over Class 1 copper pipes for capillary fittings:</u></b>			
34	15mm Fittings	No	75
35	22mm Fittings	No	75
<b><u>Testing:</u></b>			
36	Testing water pipe system		Item
<b>Carried Forward to Summary of Section No. 8</b>			R
Section No. 8			
GR10 + SD1 Grade R Unisex			
Bill No. 10			
PLUMBING AND DRAINAGE			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofoza Primary School</b>			

Item No	<b><u>SECTION NO. 8</u></b>	Quantity	Rate	Amount
	<b><u>BILL NO.11</u></b>			
	<b><u>GLAZING</u></b>			
	-----			
	<b><u>PREAMBLES</u></b>			
	<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	<b><u>Float glass:</u></b>			
	<p>The term "float glass" is used for monolithic annealed glass</p>			
	<b><u>Laminated glass:</u></b>			
	<p>Laminated glass to have polyvinyl butyral (PVB) interlayer(s)</p>			
	-----			
	<b><u>GLAZING TO STEEL WITH PUTTY</u></b>			
	<b><u>6,38mm Obscure safety glass:</u></b>			
1	Panes not exceeding 0,1m <sup>2</sup>	m2	8	
	<b>Carried Forward to Summary of Section No. 8</b>			R
	<p>Section No. 8            GR10 + SD1 Grade R Unisex            Bill No. 11            GLAZING  <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b></p>			

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 8</u></b></p>			
<p><b><u>BILL NO.12</u></b></p>			
<p><b><u>PAINTWORK</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p> <p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p> <p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>PREPARATORY WORK TO EXISTING WORK</u></b></p>			
<p><b><u>Previously painted plastered surfaces:</u></b></p> <p>Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and minor cracks shall be opened, filled with a suitable filler and finished smooth</p>			
<p><b><u>Previously painted metal surfaces:</u></b></p> <p>Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 8            GR10 + SD1 Grade R Unisex            Bill No. 12            PAINTWORK  <b>Construction of Water, Sanitation and Fencing            Fofeza Primary School</b></p>		R	

**Brought Forward**

R

**Previously painted wood surfaces:**

Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth

**PAINT SPECIFICATIONS**

All painting shall be done in accordance with "Plascon", etc specifications, unless otherwise described

**COLOURS**

When staining timber, the resultant colour or shade must be to the complete satisfaction of the Project Manager before any overcoating or preservative is applied

Paintwork is classified in the following different colour groups: "White", "Pastel", "Deep" and "Transparent" in accordance with the "Natural Colour System" (NCS) adopted by the SA National Standards  
Unless otherwise described, all paintwork shall be deemed to be classified in the "White" colour group

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**PAINTWORK, ETC TO NEW WORK**

**ON FIBRE-CEMENT BOARD SURFACES**

**One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use, on:**

1	Fascias and barge boards, including priming metal jointing strips	m2	6
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**METAL SURFACES WITH**

**One coat alkyd based zinc phosphate primer and two coats premium quality polyurethane enamel paint, on steel:**

2	Door frames	m2	22
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**Carried Forward**

R

Section No. 8  
GR10 + SD1 Grade R Unisex  
Bill No. 12  
PAINTWORK  
**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

<b>Brought Forward</b>			R
3	Windows	m2	16
4	Gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	7
5	Extra over for paintwork in the "Deep" colour group	m2	45
<b><u>ON WOOD SURFACES</u></b>			
<b><u>One coat primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on:</u></b>			
6	Doors	m2	43
7	Roof timbers at eaves and verges	m2	56
8	Extra over for paintwork in the "Deep" colour group	m2	243
<b>Carried Forward to Summary of Section No. 8</b>			R
Section No. 8			
GR10 + SD1 Grade R Unisex			
Bill No. 12			
PAINTWORK			
<b>Construction of Water, Sanitation and Fencing</b>			
<b>Fofzo Primary School</b>			

Bill No	SECTION SUMMARY - GR10 + SD1 Grade R Unisex	Page No	Amount
1	EARTHWORKS	268	
2	CONCRETE, FORMWORK AND REINFORCEMENT	272	
3	MASONRY	275	
4	WATERPROOFING	277	
5	ROOF COVERINGS	279	
6	CARPENTRY AND JOINERY	282	
7	IRONMONGERY	286	
8	METALWORK	289	
9	PLASTERING	293	
10	PLUMBING AND DRAINAGE	303	
11	GLAZING	304	
12	PAINTWORK	307	
	<b>Carried to Final Summary</b>		
	Section No. 8 GR10 + SD1 Grade R Unisex <b>Construction of Water, Sanitation and Fencing Fofzo Primary School</b>		R

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 9</u></b></p>			
<p><b><u>BILL NO.1</u></b></p>			
<p><b><u>EXTERNAL WORK (PROVISIONAL)</u></b></p>			
<p><b><u>(ALL TRADES)</u></b></p>			
<p>-----</p>			
<p><b><u>PREAMBLES</u></b></p>			
<p>The Model Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p>Labour Intensive Methods:</p>			
<p>The contractor will be required to use labour intensive for items which have been marked with the letters [LI] in the Scope of Work.</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Nature of ground:</u></b></p>			
<p>The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "soft rock" or "hard rock"</p>			
<p>The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock" or "hard rock"</p>			
<p><b>Carried Forward</b></p>			
<p>Section No. 9            SITE WORKS            Bill No. 1            EXTERNAL WORKS  <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b></p>			
		<p>R</p>	

**Brought Forward**

The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, all of which will be deemed as "earth", but possibly interspersed with "hard rock"

Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth"

A soils investigation has been carried out on the site by the Engineer and the report is annexed to these bills of quantities. The soils report indicates that the ground varies between transported soils at surface comprising gravel layers of varying thickness and interspersed with clay, and weathered shales varying from very soft rock to medium hard rock consistency, all of which will be deemed as "earth". All very hard unweathered shale, ironstone, etc the removal of which necessitates the use of explosives or heavy duty hydraulic percussion hammers (peckers), will be classified as "hard rock"

Should the Contractor encounter any "soft" or "hard" rock in the excavations, he shall immediately notify the Engineer who shall be the sole arbiter as to what constitutes "soft" or "hard" rock for final account purposes

**Subterranean water:**

No subterranean water is expected

**Excavation for working space in rock:**

Notwithstanding clause 11 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be

**Carting away of excavated material:**

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

**Carried Forward**

Section No. 9

SITE WORKS

Bill No. 1

EXTERNAL WORKS

**Construction of Water, Sanitation and Fencing**

**Fofoza Primary School**

R

R

**Brought Forward**

R

**Filling:**

Notwithstanding the reference to prescribed multiple handling in Clause 1 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any necessary multiple handling of material

**Testing:**

*Prices for backfilling to trenches and holes only are to include for all necessary density tests in accordance with SANS 1200D*

**Maintenance period:**

The maintenance period to civil works such as roads, parking and related earthworks shall be twelve calendar months

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**SITE CLEARANCE, ETC**

**Site clearance:**

1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m2	822
2	Stripping average 150mm thick layer of top soil and depositing material in prescribed stock piles on site	m2	822

**REMOVAL OF TREES, ETC**

3	Tree stump exceeding 200mm and not exceeding 500mm girth	No	7
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**PAVINGS, ETC**

**SUPPLEMENTARY PREAMBLES**

**Testing of material and filling:**

Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series

**Carried Forward**

R

Section No. 9  
 SITE WORKS  
 Bill No. 1  
 EXTERNAL WORKS  
**Construction of Water, Sanitation and Fencing  
 Fofeza Primary School**

Brought Forward			R
<b><u>EARTHWORKS</u></b>			
<b><u>Excavation in earth not exceeding 2m deep:</u></b>			
4	Over site under paving etc to reduce levels and dispose in prescribed stock piles on site	m3	173
<b><u>Extra over all excavations for carting away:</u></b>			
5	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	173
<b><u>Compaction of surfaces:</u></b>			
6	Rip and re-compact in-situ materials to a depth of 150mm, breaking down over size material and reconsolidate to 93% modified AASHTO density	m2	384
<b><u>Keeping excavations free of water:</u></b>			
7	Keeping excavations free of all water other than subterranean water		Item
<b><u>C4 filling supplied and carted on by the Contractor, stabilised with 2.5% OPC cement compacted in layers not exceeding 150mm to 97% Mod. AASHTO density</u></b>			
8	Sub-base under roads	m3	58
<b><u>Earth filling from commercial sources supplied by the Contractor under parking areas, roadways, etc:</u></b>			
9	Sub-base course of G7 material compacted to 93% Mod AASHTO density	m3	58
10	Base course stabilised G7 material with CEM II 32.5 BV compacted to 97% Mod AASHTO density	m3	58
<b><u>Weedkiller (active ingredients metalaclor 102,8 g/l, terbitilasién 248,6 g/l and atrasién 248,6 g/l) mixed in the proportion of 100 ml weedkiller to 100 l water and applied at a rate of 10 l/m2:</u></b>			
11	Under paving, etc	m2	384
<b><u>PRECAST CONCRETE</u></b>			
Carried Forward			R
Section No. 9 SITE WORKS Bill No. 1 EXTERNAL WORKS <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

Brought Forward			R
<b><u>Paving of 200 x 100 x 60mm "Type S-A" precast concrete paving bricks with butt joints, on 20mm thick river sand bed with sand-and-cement mixture swept into joints and hosed down, including preparation of ground or filling:</u></b>			
12	Paving in herringbone bond pattern to falls	m2	384
<b><u>Precast concrete finished smooth on exposed surfaces, including bedding, jointing and pointing:</u></b>			
13	150 x 300mm High kerbs (SANS 927 fig 8) with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint, including excavation, backfilling, etc	m	256
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<b><u>RAMPS</u></b>			
<b><u>EARTHWORKS</u></b>			
<b><u>Excavation in earth not exceeding 2m deep:</u></b>			
14	Reduced levels under floors	m3	7
<b><u>Extra over all excavations for carting away:</u></b>			
15	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	7
<b><u>G7 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:</u></b>			
16	Under floors, steps, pavings, etc	m3	7
<b><u>Compaction of surfaces:</u></b>			
17	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 91% Mod AASHTO density	m2	45
<b><u>Prescribed density tests on filling:</u></b>			
18	"Modified AASHTO Density" test	No	15
Carried Forward			R
Section No. 9 SITE WORKS Bill No. 1 EXTERNAL WORKS <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

<b>Brought Forward</b>		R
<b><u>Soil insecticide in accordance with SANS 5859:</u></b>		
19	Soil insecticide (protection against termites) applied as specified to bottoms and sides of trenches, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	45
	m2	
<b><u>CONCRETE WORK</u></b>		
<b><u>25MPa/19mm reinforced concrete:</u></b>		
	Ramps	14
	m3	
<b><u>Test cubes</u></b>		
20	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	5
	No	
<b><u>Finishing top surfaces of concrete smooth with a steel trowel:</u></b>		
21	Surface beds, slabs, etc to falls	45
	m2	
<b><u>FORMWORK</u></b>		
<b><u>Smooth formwork to sides:</u></b>		
22	Sloping outer edges of ramps approximately 450mm high extreme	36
	m	
<b><u>REINFORCEMENT</u></b>		
<b><u>Fabric reinforcement:</u></b>		
23	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	45
	m2	
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<b><u>APRONS</u></b>		
<b><u>EARTHWORKS</u></b>		
<b>Carried Forward</b>		R
Section No. 9 SITE WORKS Bill No. 1 EXTERNAL WORKS <b>Construction of Water, Sanitation and Fencing                      Fofeza Primary School</b>		

<b>Brought Forward</b>			R
<b><u>Excavation in earth not exceeding 2m deep:</u></b>			
24	Reduced levels under floors	m3	29
<b><u>Extra over all excavations for carting away:</u></b>			
25	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	29
<b><u>G7 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:</u></b>			
26	Under floors, steps, pavings, etc	m3	29
<b><u>Compaction of surfaces:</u></b>			
27	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 91% Mod AASHTO density	m2	195
<b><u>Prescribed density tests on filling:</u></b>			
28	"Modified AASHTO Density" test	No	65
<b><u>Soil insecticide in accordance with SANS 5859:</u></b>			
29	Soil insecticide (protection against termites) applied as specified to bottoms and sides of trenches, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	195
<b><u>CONCRETE WORK</u></b>			
<b><u>25MPa/19mm reinforced concrete:</u></b>			
	Aprons	m3	29
<b><u>Test cubes</u></b>			
30	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	10
<b>Carried Forward</b>			R
Section No. 9 SITE WORKS Bill No. 1 EXTERNAL WORKS <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

Brought Forward			R
<b><u>Finishing top surfaces of concrete smooth with a steel trowel:</u></b>			
31	Surface beds, slabs, etc to falls	m2	195
<b><u>REINFORCEMENT</u></b>			
<b><u>Fabric reinforcement:</u></b>			
32	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	195
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<b><u>THE FOLLOWING IN RAINWATER STORAGE TANK STRUCTURES:</u></b>			
<b><u>EXCAVATIONS, ETC</u></b>			
<b><u>Excavation in earth not exceeding 2m deep:</u></b>			
33	Trenches	m3	16
<b><u>Extra over trench and hole excavations in earth for excavation in:</u></b>			
34	Soft rock	m3	2
35	Hard rock	m3	1
<b><u>Extra over all excavations for carting away:</u></b>			
36	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	10
<b><u>Risk of collapse of excavations:</u></b>			
37	Sides of trench and hole excavations not exceeding 1,5m deep	m2	7
<b><u>Keeping excavations free of water:</u></b>			
38	Keeping excavations free of all water other than subterranean water		Item
Carried Forward			R
Section No. 9 SITE WORKS Bill No. 1 EXTERNAL WORKS <b>Construction of Water, Sanitation and Fencing                      Fofza Primary School</b>			

Brought Forward			R
<b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:</u></b>			
39	Backfilling to trenches, holes, etc	m3	6
<b><u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>			
<b><u>25MPa/19mm concrete:</u></b>			
	Strip footings	m3	7
	Surface beds	m3	4
<b><u>TEST BLOCKS</u></b>			
40	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	2
<b><u>MASONRY</u></b>			
<b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar in loadbearing walls etc:</u></b>			
41	One brick walls	m2	62
<b><u>2,5mm Brickwork reinforcement:</u></b>			
42	150mm Wide reinforcement built in horizontally	m	160
<b><u>FACE BRICKWORK</u></b>			
<b><u>Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u></b>			
43	Extra over brickwork for face brickwork	m2	36
<b><u>Brick-on-edge header course coping, sills, etc. of face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with recessed joints on all exposed faces</u></b>			
44	220mm Copings on top of one brick walls	m	54
Carried Forward			R
Section No. 9 SITE WORKS Bill No. 1 EXTERNAL WORKS Construction of Water, Sanitation and Fencing Fofza Primary School			

Brought Forward

R

**FENCING**

**Steel palisade fencing, gates, etc including one priming coat and two coats high gloss enamel Traffic Green paint on using compressor spray gun metal stays, gates, framing and etc:**

45	1800mm High palisade fencing comprising of 40 x 40 x 2mm angle iron welded flash with the back of the post 300mm from top of paling and 300mm from bottom of paling (350mm from ground level), 21 palings per panel consist of 30 x 30 x 2mm x 1 800mm High steel angle iron inserted and firmly welded to the bearers at 133mm centre to centre with "Devil Fork" on top and dove tail at the bottom welded to 76 x 76 x 2mm steel tubing posts 2 400mm long/ high with closing pyramid caps on top and M12 anti vandal nuts and bolts and posts set and cast into and including 300 x 300 x 600mm deep concrete base at 3 000mm centres.	m	770
46	4000 x 1800mm High Sliding gate comprising of 40 x40 x 2mm angle iron palings welded to a 76 x 38 x 2mm rectangular tubing bearer frame, palings are to be placed 133mm apart each other centre to centre with 2 x 80mm roller coaster wheels fitted with ball bearing at 500mm from edge of the gate with 12mm steel track rod welded to 40 x 40 x 5mm angle iron fixed into a 300mm Wide x 400mm thick x 5m length of the gate and 2 No x 75mm x 75mm x 2mm steel square tubing posts at each side of the gate opening with closing pyramid caps on top and planted into concrete footing 450 x 450 x 600mm deep including excavations, backfilling and locking mechanism.	No	1
47	1500mm Wide x 1800mm High Swing gate comprising of 40 x40 x 2mm angle iron palings welded to a 50 x 25 x 1.6mm rectangular tubing bearer frame, palings are to be placed 133mm apart each other centre to centre and 2 No x 75mm x 75mm x 2mm steel square tubing posts at each side of the gate opening with closing pyramid caps on top and planted into concrete footing 450 x 450 x 600mm deep including excavations, backfilling and locking mechanism.	No	1

**Carried Forward to Summary of Section No. 9**

Section No. 9  
SITE WORKS  
Bill No. 1

EXTERNAL WORKS

**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

R

Item No	Quantity	Rate	Amount
<p><b><u>SECTION NO. 9</u></b></p>			
<p><b><u>BILL NO.2</u></b></p>			
<p><b><u>SITE SERVICES (PROVISIONAL)</u></b></p>			
<p><b><u>(ALL TRADES)</u></b></p>			
<p>-----</p> <p><b><u>PREAMBLES</u></b></p>			
<p>The General Preambles for Trades (2017 edition) as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained</p>			
<p>The following "Supplementary Preambles" are incorporated in this bill to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles</p>			
<p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p>			
<p><b><u>Stormwater channels:</u></b></p>			
<p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc and disposal of surplus material on site</p>			
<p><b><u>French drains:</u></b></p>			
<p>Descriptions of french drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, approved geofabric filter blanket over stone, 300mm earthfilling over and disposal of surplus material on site</p>			
<p style="text-align: right;"><b>Carried Forward</b></p>			
<p>Section No. 9            SITE WORKS            Bill No. 2            SITE SERVICES  <b>Construction of Water, Sanitation and Fencing            Fofza Primary School</b></p>			
		R	

**Brought Forward**

R

**Septic tanks:**

Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site

**uPVC pipes and fittings:**

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

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

**uPVC pressure pipes and fittings:**

Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

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

**High density polyethylene (HDPE) pipes and fittings:**

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

**"Polycop" polypropylene pipes:**

Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings

Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions

**Carried Forward**

R

Section No. 9

SITE WORKS

Bill No. 2

SITE SERVICES

**Construction of Water, Sanitation and Fencing**

**Fofoza Primary School**

**Brought Forward**

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**Copper pipes:**

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

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

**Reducing fittings:**

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

**Disinfection of water pipework:**

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

**"Densyl" petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd.:**

Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with suitable overlaps

Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including mastic, tape, "Layflat" sheeting, securing of same, etc

**Carried Forward**

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Section No. 9

SITE WORKS

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SITE SERVICES

**Construction of Water, Sanitation and Fencing  
Fofza Primary School**

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Prices for wrapping of pipes shall include for all work as described to couplings in the length

**Laying, backfilling, bedding, etc of pipes:**

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

Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following:

SABS 1200L : Medium-pressure pipelines

SABS 1200LD : Sewers

SABS 1200LE: Stormwater drainage

Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB : Earthworks (Pipe trenches)

Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB : Bedding (Pipes)

Unless otherwise described, bedding of rigid pipes shall be Class B bedding

**General:**

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 98% Mod AASHTO density and disposal of surplus material on site

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

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**STORMWATER MANAGEMENT:**

**STORMWATER CHANNELS:**

**Carried Forward**

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Brought Forward			R
<b><u>EARTHWORKS</u></b>			
<b><u>Excavation in earth not exceeding 2m deep:</u></b>			
1	Reduced levels stormwater channels	m3	58
<b><u>Extra over all excavations for carting away:</u></b>			
2	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	58
<b><u>G7 filling material supplied by the contractor, compacted to 95% Mod AASHTO density:</u></b>			
3	Under stormwater channels, etc	m3	58
<b><u>Compaction of surfaces:</u></b>			
4	Compaction of ground surface under stormwater channels etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 91% Mod AASHTO density	m2	384
<b><u>Prescribed density tests on filling:</u></b>			
5	"Modified AASHTO Density" test	No	4
<b><u>Soil insecticide in accordance with SANS 5859:</u></b>			
6	Soil insecticide (protection against termites) applied as specified to bottoms and sides of trenches, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	384
Carried Forward			R
Section No. 9 SITE WORKS Bill No. 2 SITE SERVICES <b>Construction of Water, Sanitation and Fencing                      Fofeza Primary School</b>			

<b>Brought Forward</b>			R
<b><u>CONCRETE WORK</u></b>			
7	25Mpa/19mm Mass concrete in V-shaped channel 700mm wide x 75mm thick cast in 2 000mm intervals with rounded salient edges and finished on exposed surfaces with 2:1 cement mortar, with and including one layer of ref.193 mesh reinforcement, laid to falls in panels not exceeding 2,0m long with 12mm bitumen impregnated soft board movement joints with exposed edges raked out for a depth of 10mm and filled with bituminous compound including all necessary excavations, form work, backfilling, clearing, levelling and etc.	m	256
8	Extra for fair open end	No	85
9	Extra for fair stopped end	No	85
10	Extra for angle intersection	No	85
<b><u>Test cubes</u></b>			
11	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	10
<b><u>Finishing top surfaces of concrete smooth with a steel trowel:</u></b>			
12	Stormwater channels to falls	m2	384
<b><u>RETAINING WALLS:</u></b>			
<b><u>EXCAVATIONS, ETC</u></b>			
<b><u>Excavation in earth not exceeding 2m deep:</u></b>			
13	Trenches	m3	36
<b><u>Extra over trench and hole excavations in earth for excavation in:</u></b>			
14	Soft rock	m3	4
15	Hard rock	m3	2
<b>Carried Forward</b>			R
Section No. 9 SITE WORKS Bill No. 2 SITE SERVICES <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

<b>Brought Forward</b>			R
<b><u>Extra over all excavations for carting away:</u></b>			
16	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	49
<b><u>Risk of collapse of excavations:</u></b>			
17	Sides of trench and hole excavations not exceeding 1,5m deep	m2	240
<b><u>Keeping excavations free of water:</u></b>			
18	Keeping excavations free of all water other than subterranean water		Item
<b><u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>			
<b><u>25MPa/19mm concrete:</u></b>			
	Strip footings	m3	32
<b><u>TEST BLOCKS</u></b>			
19	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	5
<b><u>MASONRY</u></b>			
<b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar in loadbearing walls etc:</u></b>			
20	One brick walls	m2	75
<b><u>2,5mm Brickwork reinforcement:</u></b>			
21	150mm Wide reinforcement built in horizontally	m	441
<b><u>FACE BRICKWORK</u></b>			
<b><u>Face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with flush horizontal and vertical joints</u></b>			
22	Extra over brickwork for face brickwork	m2	150
<b>Carried Forward</b>			R
Section No. 9 SITE WORKS Bill No. 2 SITE SERVICES <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

Brought Forward			R
	<b><u>Brick-on-edge header course coping, sills, etc. of face bricks (Allow a Prime Cost Amount of R5 500.00/1000 bricks delivered to site excluding VAT) pointed with recessed joints on all exposed faces</u></b>		
23	220mm Copings on top of one brick walls	m	150
	<b><u>THE FOLLOWING IN SEPTIC TANK:</u></b>		
	<b><u>EARTHWORKS</u></b>		
	<b><u>Excavation in earth exceeding 2m and not exceeding 4m deep:</u></b>		
24	Septic tank pit	m3	140
	<b><u>Extra over trench and hole excavations in earth for excavation in:</u></b>		
25	Soft rock	m3	14
26	Hard rock	m3	7
	<b><u>Extra over all excavations for carting away:</u></b>		
27	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	125
	<b><u>Risk of collapse of excavations:</u></b>		
28	Sides of trench and hole excavations not exceeding 1,5m deep	m2	80
	<b><u>Keeping excavations free of water:</u></b>		
29	Keeping excavations free of all water other than subterranean water		Item
	<b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density:</u></b>		
30	Backfilling to trenches, holes, etc	m3	15
	<b>Carried Forward</b>		R
	Section No. 9 SITE WORKS Bill No. 2 SITE SERVICES <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>		

<b>Brought Forward</b>			R
<b><u>Compaction of surfaces:</u></b>			
31	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 91% Mod AASHTO density	m2	80
<b><u>Prescribed density tests on filling:</u></b>			
32	"Modified AASHTO Density" test	No	5
<b><u>Soil insecticide in accordance with SANS 5859:</u></b>			
33	Soil insecticide (protection against termites) applied as specified to bottoms and sides of trenches, etc including forming and poisoning shallow furrows against foundation walls, etc filling in furrows and ramming	m2	80
<b><u>CONCRETE WORK</u></b>			
<b><u>15MPa/19mm unreinforced concrete:</u></b>			
34	Surface blinding under footings and bases	m3	15
<b><u>25MPa/19mm reinforced concrete:</u></b>			
	Mass concrete to bottoms	m3	20
	Slabs	m3	15
<b><u>Test cubes</u></b>			
35	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	4
<b><u>FORMWORK</u></b>			
<b><u>Smooth formwork to sides:</u></b>			
36	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	25
<b><u>REINFORCEMENT</u></b>			
<b>Carried Forward</b>			R
Section No. 9 SITE WORKS Bill No. 2 SITE SERVICES <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

<b>Brought Forward</b>			R
<b><u>Fabric reinforcement:</u></b>			
37	Type 395 fabric reinforcement in concrete surface beds, slabs, etc	m2	80
<b><u>High tensile steel reinforcement to structural concrete work:</u></b>			
38	110mm Diameter drain pipes, fixed raking or vertically in ramps to cleaning eyes, etc (no excavations)	m	20
39	All Diameter bars	t	3.00
40	110mm Pipes laid in and including trenches not exceeding 1m deep	m	20
41	110mm Pipes laid in and including trenches exceeding 1m and not exceeding 2m deep	m	5
42	Extra over uPVC piping for 110mm bend	No	5
<b><u>BRICKWORK</u></b>			
<b><u>Brickwork of NFP bricks in class II mortar</u></b>			
43	Half brick walls	m2	17
44	Extra over uPVC piping for 110mm junction	No	20
45	One brick walls	m2	70
46	Extra over uPVC piping for 110mm stop end	No	10
<b>Carried Forward</b>			R
Section No. 9 SITE WORKS Bill No. 2 SITE SERVICES <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

<b>Brought Forward</b>			R
47	110mm uPVC cleaning eye fixed to 110mm uPVC drain pipe, including 350 x 350 x 75mm thick in-situ 15 MPa/19mm mass concrete surround, the whole finished smooth on all exposed faces with exposed angles rounded, including all necessary excavations, formwork, backfilling, etc.	No	2
<b><u>BRICKWORK SUNDRIES:</u></b>			
<u>Bagging of 1:3 cement and sand mixture</u>			
48	Outer face of external brick wall	m2	350
<b><u>2,5mm Brickwork reinforcement:</u></b>			
49	75mm Wide reinforcement built in horizontally	m	44
50	150mm Wide reinforcement built in horizontally	m	206
<b><u>One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:</u></b>			
51	Under surface beds	m2	50
<b><u>SPECIAL FLOOR COATING</u></b>			
<b><u>Prepare all surfaces as necessary, prime with "Flowprime" primer and apply 6mm thick anti-slip "Flowcrete Flowfresh HF" or similar approved heavy duty chemical resistant antimicrobial treated polyurethane resin floor screed of approved colour and applied by an approved specialist, on:</u></b>			
52	On internal plastered walls	m2	88
<b><u>INTERNAL PLASTER</u></b>			
<b><u>Cement plaster steel trowelled, on brickwork:</u></b>			
53	On walls	m2	88
<b>Carried Forward</b>			R
Section No. 9 SITE WORKS Bill No. 2 SITE SERVICES <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

Brought Forward

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**THE FOLLOWING IN PREFABRICATED STEEL TANK:**

**EARTHWORKS**

**SITE PREPARATION**

54	Remove topsoil to nominal depth 150mm, stockpile and maintain	m2	25
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**BULK EXCAVATION - TANK BASE**

b) Extra-over for:

55	Intermediate excavation	m3	3
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56	Hard rock excavation	m3	5
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**RESTRICTED EXCAVATIONS**

57	Excavate for restricted foundations, footings and trenches in all materials and use for backfill or embankment or dispose.	m3	25
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**EARTHWORKS (ROADS, SUBGRADE)**

58	Rip and re-compact insitu to 90% MOD AASHTO	m3	1
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59	Geotechnical grid (Traix TX170)	m2	1
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60	Backfill 500mm with course insitu material in 150mm layers.	m3	5
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Carried Forward

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 SITE WORKS  
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**Construction of Water, Sanitation and Fencing  
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Brought Forward			R
<b><u>PREFABRICATED TANK</u></b>			
61	Supply, handle, install, erect hot dipped galvanised Prefabricated steel tank. 4,88m length x 4.88m width x 2.44m deep. Including lockable access manhole with built-in screened vent. Internal and external ladder, a level indicator, as well as all fittings required for installation. And the supply, handling, installation, and erection of hot dipped galvanised steel support structures 6m high, including an access ladder with safety cage. As well as all standard fittings required for installation and walkway around tank base with rails	No	1
<b><u>CONCRETE</u></b>			
62	Binding layer in 15MPa concrete (50mm thick)	m2	1
63	Shutter rough	m2	25
<b><u>SCHEDULED REINFORCEMENT</u></b>			
64	Steel bars	t	3.00
65	Strength of concrete grade 30/19	m3	23
<b><u>UNFORMED SURFACE FINISHES</u></b>			
66	Steel float	m2	25
67	M20 Bolts cast in complete with washer plate and nuts, all galvanised.	No	16
<b><u>PIPES</u></b>			
<b><u>Supply, lay, bed, test, disinfect flanged pipes complete with couplings for Class 16 mild steel pipes of the following diameter: (All material including fittings to be SABS approved)</u></b>			
68	1. 65 mm diameter	m	18
69	3. 80 mm diameter	m	12
Carried Forward			R
Section No. 9 SITE WORKS Bill No. 2 SITE SERVICES <b>Construction of Water, Sanitation and Fencing Fofeza Primary School</b>			

Brought Forward				R
<b><u>Supply, handle, lay, disinfect, bed in flexible pipe bedding and test uPVC class 16 pipes complete with spigot and socket joints.(All material including fittings to be SABS approved)</u></b>				
70	1. 75 mm diamete	m	12	
71	2. 90 mm diameter	m	12	
<b><u>SPECIALS AND FITTINGS</u></b>				
Extra-over 8.2.1 for supplying, laying, bedding, jointing and testing of the following fittings for use on Steel pipes				
<b><u>90 degree bends</u></b>				
72	1. 75mm	No	4	
73	2. 90mm	No	8	
<b><u>Equal Tee</u></b>				
74	1. 100mm x 100mm	No	2	
Extra-over 8.2.1 for supplying, laying, bedding, jointing and testing of the following fittings for use on uPVC pipes				
<b><u>90 degree bends</u></b>				
75	1. 75mm	No	1	
76	2. 90mm	No	1	
<b><u>11.25 degree Bends</u></b>				
77	1. 75mm	No	1	
78	2. 90mm	No	1	
<b><u>22.5 degree Bends</u></b>				
79	1. 75mm	No	1	
80	2. 90mm	No	1	
Carried Forward				R
Section No. 9 SITE WORKS Bill No. 2 SITE SERVICES <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>				

Brought Forward				R
<b><u>45 degree Bends</u></b>				
81	1. 75mm	No	1	
82	2. 90mm	No	1	
<b><u>Flange adaptors</u></b>				
83	1. 110mm	No	4	
<b><u>Extra over Item 8.2.1 for supplying, fixing and bedding of valves; Class 16:</u></b>				
<u>Viking Johnson/Klamflex flanged adaptors PN 16</u>				
84	1. 100mm	No	2	
85	ND100 AVK Dismantling joint PN16 or similar approved	No	4	
86	ND100 flanged cosmos Meinecke WPD bulk meter with digital output or similar approved; Class 16	No	1	
87	ND100 flanged Bermad 70F Y-Pattern strainer or similar approved; Class 16	No	2	
88	ND100 flanged ball valve; Class 16	No	1	
89	Steel Plinths	No	4	
90	DN25 automatic air release valve, Vent O Mat or similar approved brand as per inlet chamber detail; Class 25	No	2	
91	ND25 brass fullway gate valve to sabs 776 Class 10	No	2	
92	ND25 galvanised barrel nipple PN16	No	2	
93	ND100 In line tee with outlet diameter as specified in the nodal descriptions and reduced to 25bsp female end connection PN16	No	2	
<b>Carried Forward</b>				R
Section No. 9 SITE WORKS Bill No. 2 SITE SERVICES <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>				

<b>Brought Forward</b>			R
94	ND100 mm, 150mm long double flanged pipe, PN 16 to SANS standard	No	2
95	ND100 mm, 600mm long double flanged pipe, PN 16 to SANS standard	No	2
96	ND100 flanged Vosa Series 7354 Equilibrium float valve or similar approved; Class 16	No	1
97	DN100 flanged mild steel flanged sweep tee; flanges drilled according to SANS 1123 table 16	No	1
98	DN100 Blank flange with 20 mm hole drilled onto it and 25 mm nipple welded onto it; nipple to be male threaded on one end.	No	1
99	DN25 Female threaded ball valve, PN16	No	1
100	DN25 Nipple, one end male and one end female threaded	No	1
101	DN25 automatic air release valve, Vent O Mat or similar approved brand as per tank inlet detail; Class 25	No	1
102	ND100 mm, 240mm long double flanged pipe, PN 16 to SANS standard	No	1
103	ND150 mild steel pipe, PN 16,6m long,one end flanged as per detail drawing 14491-D-C-WAT-D05, actual length of pipe to be confirmed on site confirmed on site	No	1
<b><u>Isolating valves</u></b>			
Extra-over item 6.13 for the supplying, installing cutting in and testing flanged Class 16 anti-clockwise closing non rising spindle resilient seal gate valves for steel pipes as shown on detailed drawings for pipe diameters			
104	1. 100 mm diameter	No	5
105	2. 150 mm	No	1
<b>Carried Forward</b>			R
Section No. 9 SITE WORKS Bill No. 2 SITE SERVICES <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

<b>Brought Forward</b>			R
<b><u>CHAMBERS</u></b>			
106	Construct concrete inlet and outlet chamber Type 1 complete with step irons, and frames as per detailed drawings, up to 2.0m depth.	No	1
107	Construct scour valve chamber Type 4, complete with stepirons, frames and and scour wing wall structure as per detailed drawings up to 2.5m depth.	No	1
<b><u>SUNDRIES</u></b>			
108	Thrust blocks and pedestals class 25/19 concrete	m3	5
<b><u>THE FOLLOWING IN UPGRADING OF EXISTING BOREHOLE:</u></b>			
<b><u>Supply and installantion of borehole pumps and ancillary equipment:</u></b>			
<b><u>Submissiblet pump unit or similar approved</u></b>			
109	Pump at 1.0 l/s for the borehole depth of 95m with the total Head (H) 120m at 25000rpm	No	1
110	Pump motor of 2,1 kww motor	No	1
111	Submisible pump automated Control panel box	No	1
<b><u>Supply and installation of electrical cable from DB box to the bohole inclusive of the borehole depth</u></b>			
112	220V of 10mm2 electic cable for 2,1 kw pump motor for the total distance 200m length	m	200
113	20mm thick nylon cable for to tughten the pump until the collar	m	100
<b><u>Borehole rising main:</u></b>			
114	Supply and installation of 40mm HDPE Class 12 pipe from borehole depth to the new tank	m	450
<b>Carried Forward</b>			R
Section No. 9 SITE WORKS Bill No. 2 SITE SERVICES <b>Construction of Water, Sanitation and Fencing Fofza Primary School</b>			

**Brought Forward**

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**Borehole fittings:**

115 All borehole fittings inclusive of all pipe fittings, tees, bends, straight joints etc

SUM

**WATER STORAGE TANKS:**

**"Jojo" or similar approved Type SG1 polyethylene drinking water tanks with black lining internally, complete with tank connector at the bottom, inlet and over-flow on top or (side) with a 40mm fitting (female) and 430mm diameter lid with e-clips on top of the tank:**

116 5250 Litre vertical tank (colour green) size 1800mm diameter x 2300mm high overall, the tank securely bolted in position to top of reinforced concrete base (base elsewhere measured)

No

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**Carried Forward to Summary of Section No. 9**

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Section No. 9

SITE WORKS

Bill No. 2

SITE SERVICES

**Construction of Water, Sanitation and Fencing  
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**SECTION SUMMARY - SITE WORKS**

Bill No		Page No	Amount
1	EXTERNAL WORKS	318	
2	SITE SERVICES	336	
<b>Carried to Final Summary</b>			R
Section No. 9 SITE WORKS <b>Construction of Water, Sanitation and Fencing                      Fofza Primary School</b>			

Section No	<u>FINAL SUMMARY</u>	Page No	Amount
1	Preliminaries	43	
2	Demolitions	47	
3	Alterations to 2 x SD6 Educators Ablutions	89	
4	SF6 + SD1 Female and Educators Ablutions	133	
5	F6 + SD1 Female Ablutions	177	
6	SM3 + 3UR Male and Educators Ablutions	220	
7	M6 + 5UR and M4 +4UR Male Ablutions	264	
8	GR10 + SD1 Grade R Unisex	308	
9	SITE WORKS	337	
	SUB TOTAL		R
	<b><u>CONTRACT CONTINGENCIES</u></b>		
	Allow the sum of 10% (ten percent) of the above sub total for Contingencies to be spent as the Principal Agent may direct and to be deducted in whole or in part if not required		R
	SUB TOTAL		R
	<b><u>VALUE ADDED TAX</u></b>		
	Value Added Tax [15%]		R
	<b>Carried to Form of Tender</b>		R
	<b>Construction of Water, Sanitation and Fencing Fofeza Primary School</b>		