

**Bills of Quantities**

**for**

**Implementing agents**



**Client**



**education**

Department:  
Education  
**PROVINCE OF KWAZULU-NATAL**

**Early Childhood Development**

**for**

**Mzomusha Primary School**

**Umzinyathi District**

**Emis No: 500222481**

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

	<p>SECTION A: JBCC PRINCIPAL BUILDING AGREEMENT</p> <p>DEFINITIONS</p> <p>A1.0 DEFINITIONS AND INTERPRETATION Clause 1.0 Clause 1.1 Definition of "Commencement Date" is added:</p> <p>COMMENCEMENT DATE means the date that the agreement, made in terms of the Form of Offer and Acceptance, comes into effect</p> <p>Clause 1.1 Definition of "Construction Guarantee" is amended by replacing it with the following:</p> <p>CONSTRUCTION GUARANTEE means a guarantee at call obtained by the contractor from an institution approved by the employer in terms of the employer's construction guarantee form as selected in the schedule</p> <p>Clause 1.1 Definition of "Construction Period" is amended by replacing it with the following:</p> <p>CONSTRUCTION PERIOD means the period commencing on the commencement date and ending on the date of practical completion</p> <p>Clause 1.1 Definition of "Corrupt Practice" is added:</p> <p>CORRUPT PRACTICE means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution</p> <p>Clause 1.1 Definition of "Fraudulent Practice" is added:</p> <p>FRAUDULENT PRACTICE means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any tenderer and includes collusive practice among tenderers (prior to or after the tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the tenderer of the benefits of free and open competition</p> <p>Clause 1.1 Definition of "Interest" is amended by replacing it with the following:</p>				
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>INTEREST means the interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the 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)</p> <p>Clause 1.1 Definition of "Principal Agent" is amended by replacing it with the following:</p> <p>PRINCIPAL AGENT means the person or entity appointed by the employer and named in the schedule. In the event of a principal agent not being appointed, then all the duties and obligations of a principal agent as detailed in the agreement shall be fulfilled by a representative of the employer as named in the schedule</p> <p>Clause 1.1 Definition of "Security" is amended by replacing it with the following:</p> <p>SECURITY means the form of security provided by the employer or contractor, as stated in the schedule, from which the contractor or employer may recover expense or loss</p> <p>Clause 1.6 is amended by replacing the words "prepaid registered post, telefax or e-mail" with "prepaid registered post or telefax"</p> <p>Clause 1.6.4 is amended by replacing it with the following:</p> <p>No clause Fixed:_____ Value related:_____</p> <p>Time related:_____</p> <p>OBJECTIVE AND PREPARATION</p> <p>A2.0 OFFER, ACCEPTANCE AND PERFORMANCE Clause 2.0</p> <p>Fixed:_____ Value related:_____ Time</p> <p>2 related:_____</p>	Item	1		
		Item	1		

3	<p>A3.0 DOCUMENTS Clause 3.0 Clause 3.2.1 is amended by replacing "14.1" with "14.0" Clause 3.7 is amended by the addition of the following: The contractor shall supply and keep a copy of the JBCC Series 2000 Principal Building Agreement and Preliminaries applicable to this contract on the site, to which the employer, principal agent and agents shall have access at all times Clause 3.10 is amended by replacing the second reference to "principal agent" with the word "employer" Fixed: _____ Value related: _____ Time related: _____</p>	Item			
4	<p>A4.0 DESIGN RESPONSIBILITY Clause 4.0 Clause 4.3 is amended by replacing it with the following: No clause Fixed: _____ Value related: _____ Time related: _____</p>	Item			
5	<p>A5.0 EMPLOYER'S AGENTS Clause 5.0 Clause 5.1.2 is amended to include clauses 32.6.3, 34.3, 34.4 and 38.5.8 Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		
6	<p>A6.0 SITE REPRESENTATIVE Clause 6.0 Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		
7	<p>A7.0 COMPLIANCE WITH REGULATIONS Clause 7.0 Note: A separate clause has been included in Section C : Specific Preliminaries of the bills of quantities / lump sum document for the contractor to have the opportunity to price for all the requirements of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		
8	<p>A8.0 WORKS RISK Clause 8.0 Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		
9	<p>A9.0 INDEMNITIES Clause 9.0 Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		
10	<p>A10.0 WORKS INSURANCES Clause 10.0 Clause 10.0 is amended by the addition of the following clauses:</p>				

<p>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</p> <p>(b) The contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works</p> <p>© The employer shall carry the risk of damage to or destruction of the works and materials paid for by the employer that is the result of the excepted risks as set out in 10.6</p> <p>(d) Where the employer bears the risk in terms of this contract, the contractor shall, if requested to do so, reinstate any damage or destroyed portions of the works and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof</p> <p>10.6 Injury to Persons or loss of or damage to Properties (a) The contractor shall be liable for and hereby indemnifies the employer against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the works unless due to any act or negligence of any person for whose actions the employer is legally liable</p> <p>(b) The contractor shall be liable for and hereby indemnifies the employer against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the site, whether belonging to or under the control of the employer or any other body or person, arising out of or in the course of or by reason of the execution of the works unless due to any act or negligence of any person for whose actions the employer is legally liable</p>				
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

<p>© 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</p> <p>(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</p> <p>(e )Where the execution of the works involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the contractor shall obtain adequate insurance and will remain adequately insured or insured to the specific limit stated in the contract against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the works has been completed</p> <p>(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</p> <p>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:</p> <p>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</p>				
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

<p>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</p> <p>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</p> <p>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</p> <p>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</p> <p>10.7.4 The employer shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the contractor's default of his obligations as set out in 10.7.1; 10.7.2 and 10.7.3. Such losses or damages may be recovered from the contractor or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the employer and the contractor and for this purpose all these contracts shall be considered one indivisible whole Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------	---	--	--



11	A11.0 LIABILITY INSURANCES Clause 11.0 Fixed: _____ Value related: _____ Time related: _____	Item	1		
12	A12.0 EFFECTING INSURANCES Clause 12.0 Fixed: _____ Value related: _____ Time related: _____	Item	1		
13	A13.0 No clause N/A				
14	A14.0 SECURITY Clause 14.0 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 provided by the contractor to the employer will be 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:				

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

<p>14.4.3 The employer shall return the variable construction guarantee to the contractor within fourteen (14) calendar days of it expiring</p> <p>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</p> <p>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:</p> <p>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)</p> <p>14.5.2 The fixed construction guarantee shall come into force on the date of issue and shall expire on the date of the last certificate of practical completion</p> <p>14.5.3 The employer shall return the fixed construction guarantee to the contractor within fourteen (14) calendar days of it expiring</p> <p>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</p> <p>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</p> <p>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:</p> <p>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</p>				
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

<p>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</p> <p>14.6.3 The payment reduction of the value certified in a payment certificate shall be mutatis mutandi in terms of 31.8(A)</p> <p>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</p> <p>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:</p> <p>14.7.1 The payment reduction of the value certified in a payment certificate shall be mutatis mutandi in terms of 31.8(B)</p> <p>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</p> <p>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</p> <p>14.9 Should the contractor fail to furnish the security in terms of 14.2, the employer, in his sole discretion and without notification to the contractor, is entitled to change the contractor's selected form of security to that of a ten per cent (10%) payment reduction of the value certified in the payment certificate (excluding VAT), whereafter 14.7 shall be applicable Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------	---	--	--

	EXECUTION				
	A15.0 PREPARATION FOR AND EXECUTION OF THE WORKS Clause 15.0 Clause 15.1.1 is amended by replacing it with: No clause Clause 15.1.2 is amended by replacing it with: 15 The security selected in terms of 14.0				
	Clause 15.1 is amended by the addition of the following clause: 15.1.4 An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), within 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 15.1.4 Fixed: _____ Value related: _____ Time related: _____	Item		1	
	A16.0 ACCESS TO THE WORKS Clause 16.0 Fixed: _____ Value related: _____ Time 16 related: _____	Item		1	
	A17.0 CONTRACT INSTRUCTIONS Clause 17.0 Clause 17.1.11 is amended by deleting the words "and the appointment of nominated and selected subcontractors" Fixed: _____ Value related: _____ Time 17 related: _____	Item		1	
	A18.0 SETTING OUT OF THE WORKS Clause 18.0 Fixed: _____ Value related: _____ Time 18 related: _____	Item		1	
	A19.0 ASSIGNMENT Clause 19.0 Fixed: _____ Value 19 related: _____ Time related: _____	Item		1	
	A20.0 NOMINATED SUBCONTRACTORS Clause 20.0 Clause 20.1.3 is amended by replacing it with the following: No clause Note: See item B9.1 hereinafter for adjustment of attendance on nominated subcontractors executing work allowed for under provisional sums Fixed: _____ 20 Value related: _____ Time related: _____	Item		1	

21	A21.0 SELECTED SUBCONTRACTORS Clause 21.0 Clause 21 is amended by replacing it with: No clause Fixed: _____ Value related: _____ Time related: _____	Item	1		
22	A22.0 EMPLOYER'S DIRECT CONTRACTORS Clause 22.0 Fixed: _____ Value related: _____ Time related: _____	Item	1		
23	A23.0 CONTRACTOR'S DOMESTIC SUBCONTRACTORS Clause 23.0 Fixed: _____ Value related: _____ Time related: _____	Item	1		
COMPLETION					
24	A24.0 PRACTICAL COMPLETION Clause 24.0 Fixed: _____ Value related: _____ Time related: _____	Item	1		
25	A25.0 WORKS COMPLETION Clause 25.0 Fixed: _____ Value related: _____ Time related: _____	Item	1		
26	A26.0 FINAL COMPLETION Clause 26.0 Clause 26.1.2 is amended by inserting "#" next to 26.1.2 Fixed: _____ Value related: _____ Time related: _____	Item	1		
27	A27.0 LATENT DEFECTS LIABILITY PERIOD Clause 27.0 Fixed: _____ Value related: _____ Time related: _____	Item	1		
28	A28.0 SECTIONAL COMPLETION Clause 28.0 Fixed: _____ Value related: _____ Time related: _____	Item	1		
29	A29.0 REVISION OF DATE FOR PRACTICAL COMPLETION Clause 29.0 Clause 29.2.5 is amended by replacing it with: No clause Fixed: _____ Value related: _____ Time related: _____	Item	1		
30	A30.0 PENALTY FOR NON-COMPLETION Clause 30.0 Fixed: _____ Value related: _____ Time related: _____	Item	1		
PAYMENT					
31	A31.0 INTERIM PAYMENT TO THE CONTRACTOR Clause 31.0				

<p>Clause 31.5.2 is amended by replacing "14.7.1" with "14.0"</p> <p>Clause 31.8 is amended by replacing it with the following two alternative clauses:</p> <p>Alternative A 31.8(A) Where a security is selected in terms of 14.1; 14.5 or 14.6, the value of the works in terms of 31.4.1 and materials and goods in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:</p> <p>31.8(A).1 Ninety-five per cent (95%) of such value in interim payment certificates issued up to the date of practical completion</p> <p>31.8(A).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</p> <p>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</p> <p>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</p> <p>Alternative B</p> <p>31.8(B) Where security as a payment reduction in terms of 14.7 has been selected, the value of the works in terms of 31.4.1 and materials and goods in terms of 31.4.2 shall be certified in full. The value certified shall be subject to the following percentage adjustments:</p> <p>31.8(B).1 Ninety per cent (90%) of such value in interim payment certificates issued up to the date of practical completion</p> <p>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</p>				
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>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</p> <p>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</p> <p>Clause 31.12 is amended by deleting the following:</p> <p>Payment shall be subject to the employer giving the contractor a tax invoice for the amount due  Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
32	<p>A32.0 ADJUSTMENT TO THE CONTRACT VALUE Clause 32.0  Clauses 32.5.1, 32.5.4 and 32.5.7 are amended by the addition of the following at the end of the sentence: "due to no fault of the contractor" Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
33	<p>A33.0 RECOVERY OF EXPENSE AND LOSS Clause 33.0  Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
34	<p>A34.0 FINAL ACCOUNT AND FINAL PAYMENT Clause 34.0  Clause 34.1 is amended by removing "#" next to 34.1 Clause 34.2 is amended by inserting "#" next to 34.2 Clause 34.8 is amended by deleting the words "where security as a fixed construction guarantee in terms of 14.4 has been selected or where payment reduction has been applied in terms of 14.7.1" Clause 34.13 is amended by replacing "seven (7) calendar days" with "twenty-one (21) calendar days" and deleting the words "subject to the employer giving the contractor a tax invoice for the amount due"  Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
35	<p>A35.0 PAYMENT TO OTHER PARTIES Clause 35.0  Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		



	<p>CANCELLATION</p> <p>A36.0 CANCELLATION BY EMPLOYER - CONTRACTOR'S DEFAULT Clause 36.0 Clause 36.1 is amended by the addition of the following clauses: 36.1.3 refuses or neglects to comply strictly with any of the conditions of contract 36.1.4 estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa 36.1.5 in the judgement of the employer, has engaged in corrupt or fraudulent practices in competing for or in executing the contract Clause 36.3 is amended by removing the reference to "No clause" and replacing the words "principal agent" with "employer"</p> <p>36 Clause 36.0 is amended by the addition of the following clause:</p> <p>36.7 Notwithstanding any clause to the contrary, on cancellation of this agreement either by the employer or the contractor; or for any reason whatsoever, the contractor shall on written instruction, discontinue with the works on a date stated and withdraw himself from the site. The contractor shall not be entitled to refuse to withdraw from the works on the grounds of any lien or right of retention or on the grounds of any other right whatsoever        Fixed: _____ Value related: _____ Time related: _____</p> <p>A37.0 CANCELLATION BY EMPLOYER - LOSS AND DAMAGE Clause 37.0 Clause 37.3.5 is amended by replacing "ninety (90)" with "one hundred and twenty (120)"</p> <p>37 Clause 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        Fixed: _____ Value related: _____ Time related: _____</p>	<p>Item</p> <p>Item</p>	<p>1</p> <p>1</p>		
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------	-------------------	--	--

38	<p>A38.0 CANCELLATION BY CONTRACTOR - EMPLOYER'S DEFAULT Clause 38.0 Clause 38.5.4 is amended by replacing "ninety (90)" with "one hundred and twenty (120)" Clause 38.0 is amended by the addition of the following clause:</p> <p>38.7 Notwithstanding any clause to the contrary, on cancellation of this agreement either by the employer or the contractor; or for any reason whatsoever, the contractor shall on written instruction, discontinue with the works on a date stated and withdraw himself from the site. The contractor shall not be entitled to refuse to withdraw from the works on the grounds of any lien or right of retention or on the grounds of any other right whatsoever          Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
39	<p>A39.0 CANCELLATION - CESSATION OF THE WORKS Clause 39.0 Clause 39.3.5 is amended by the addition of the following at the end of the sentence: "within one hundred and twenty (120) working days of completion of such a report" Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
40	<p>DISPUTE</p> <p>A40.0 DISPUTE SETTLEMENT Clause 40.0 Clause 40.2.2 is amended by replacing "one (1) year" with "three (3) years" Clause 40.6 is amended by removing the reference to: No clause Clause 40.7.1 is amended by replacing "(10)" with "(15)" and by the addition of the following: Whether or not mediation resolves the dispute, the parties shall bear their own costs concerning the mediation and equally share the costs of the mediator and related costs</p> <p>SUBSTITUTE PROVISIONS</p>				
41	<p>A41.0 STATE CLAUSES Clause 41.0 Fixed:_____ Value related:_____ Time related:_____</p> <p>CONTRACT VARIABLES</p>	Item	1		
42	<p>A42.0 THE SCHEDULE (DPW-04EC) Clause 42.0 Tenderers are referred to the Contract Data DPW-04(EC) for variables pertaining to this contract Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		

	SECTION B: JBCC PRELIMINARIES				
	B1.0 DEFINITIONS AND INTERPRETATION				
	B1.1 Definitions and interpretation See also clause A1.0 of Section A for additional and/or amended definitions which shall apply equally to this Section Fixed:_____				
43	Value related:_____ Time related:_____	Item		1	
	B2.0 DOCUMENTS				
	B2.1 Checking of documents Fixed:_____ Value related:_____ Time related:_____	Item		1	
	B2.2 Provisional bills of quantities Fixed:_____ Value related:_____ Time related:_____	Item		1	
45					
46	B2.3 Availability of construction documentation Fixed:_____ Value related:_____ Time related:_____	Item		1	
47	B2.4 Interests of agents Fixed:_____ Value related:_____ Time related:_____	Item		1	
48	B2.5 Priced documents Fixed:_____ Value related:_____ Time related:_____	Item		1	
49	B2.6 Tender submission Clause 2.6 is amended by replacing "JBCC Form of Tender" with "Form of Offer and Acceptance DPW-07(EC)" Fixed:_____ Value related:_____ Time related:_____	Item		1	
	B3.0 THE SITE				
50	B3.1 Defined works area Fixed:_____ Value related:_____ Time related:_____	Item		1	
51	B3.2 Geotechnical investigation Fixed:_____ Value related:_____ Time related:_____	Item		1	
52	B3.3 Inspection of the site Fixed:_____ Value related:_____ Time related:_____	Item		1	
53	B3.4 Existing premises occupied Fixed:_____ Value related:_____ Time related:_____	Item		1	

54	B3.5 Previous work - dimensional accuracy Fixed: _____ Value related: _____ Time related: _____	Item	1		
55	B3.6 Previous work - defects Fixed: _____ Value related: _____ Time related: _____	Item	1		
56	B3.7 Services - known Fixed: _____ Value related: _____ Time related: _____	Item	1		
57	B3.8 Services - unknown Fixed: _____ Value related: _____ Time related: _____	Item	1		
58	B3.9 Protection of trees Fixed: _____ Value related: _____ Time related: _____	Item	1		
59	B3.10 Articles of value Fixed: _____ Value related: _____ Time related: _____	Item	1		
60	B3.11 Inspection of adjoining properties Fixed: _____ Value related: _____ Time related: _____	Item	1		
	B4.0 MANAGEMENT OF CONTRACT				
61	B4.1 Management of the works Fixed: _____ Value related: _____ Time related: _____	Item	1		
62	B4.2 Programme for the works Fixed: _____ Value related: _____ Time related: _____	Item	1		
63	B4.3 Progress meetings Fixed: _____ Value related: _____ Time related: _____	Item	1		
64	B4.4 Technical meetings Fixed: _____ Value related: _____ Time related: _____	Item	1		
65	B4.5 Labour and plant records Fixed: _____ Value related: _____ Time related: _____	Item	1		
	B5.0 SAMPLES, SHOP DRAWINGS AND MANUFACTURERS' INSTRUCTIONS				
66	B5.1 Samples of materials Fixed: _____ Value related: _____ Time related: _____	Item	1		

67	B5.2 Workmanship samples Fixed:_____ Value related:_____ Time related:_____	Item	1		
68	B5.3 Shop drawings Fixed:_____ Value related:_____ Time related:_____	Item	1		
69	B5.4 Compliance with manufacturers' instructions Fixed:_____ Value related:_____ Time related:_____	Item	1		
	B6.0 TEMPORARY WORKS AND PLANT				
70	B6.1 Deposits and fees Fixed:_____ Value related:_____ Time related:_____	Item	1		
71	B6.2 Enclosure of the works Fixed:_____ Value related:_____ Time related:_____	Item	1		
72	B6.3 Advertising Fixed:_____ Value related:_____ Time related:_____	Item	1		
73	B6.4 Plant, equipment, sheds and offices Fixed:_____ Value related:_____ Time related:_____	Item	1		
74	B6.5 Main notice board Fixed:_____ Value related:_____ Time related:_____	Item	1		
75	B6.6 Subcontractors' notice board Fixed:_____ Value related:_____ Time related:_____	Item	1		
	B7.0 TEMPORARY SERVICES				
76	B7.1 Location Fixed:_____ Value related:_____ Time related:_____	Item	1		
77	B7.2 Water Fixed:_____ Value related:_____ Time related:_____	Item	1		
78	B7.3 Electricity Fixed:_____ Value related:_____ Time related:_____	Item	1		
79	B7.4 Telecommunication facilities Fixed:_____ Value related:_____ Time related:_____	Item	1		
80	B7.5 Ablution facilities Fixed:_____ Value related:_____ Time related:_____	Item	1		

	B8.0 PRIME COST AMOUNTS				
	B8.1 Responsibility for prime cost amounts Fixed:_____ Value related:_____ Time related:_____	Item	1		
81					
	B9.0 ATTENDANCE ON N/S SUBCONTRACTORS				
	B9.1 General attendance Fixed:_____ Value related:_____ Time related:_____	Item	1		
82					
	B9.2 Special attendance Fixed:_____ Value related:_____ Time related:_____	Item	1		
83					
	B9.3 Commissioning - fuel, water and electricity Fixed:_____ Value related:_____ Time related:_____	Item	1		
84					
	B10.0 FINANCIAL ASPECTS				
	B10.1 Statutory taxes, duties and levies Fixed:_____ Value related:_____ Time related:_____	Item	1		
85					
	B10.2 Payment for preliminaries Fixed:_____ Value related:_____ Time related:_____	Item	1		
86					
	B10.3 Adjustment of preliminariesClauses B10.3.1 and B10.3.2 are amended by replacing "within fifteen (15) working days of taking possession of the site" with "when submitting his priced bills of quantities / lump sum document" Fixed:_____ Value related:_____ Time related:_____	Item	1		
87					
	B10.4 Payment certificate cash flow Fixed:_____ Value related:_____ Time related:_____	Item	1		
88					
	B11.0 GENERAL				
	B11.1 Protection of the works Fixed:_____ Value related:_____ Time related:_____	Item	1		
89					
	B11.2 Protection / isolation of existing / sectionally occupied works Fixed:_____ Value related:_____ Time related:_____	Item	1		
90					
	B11.3 Security of the works Fixed:_____ Value related:_____ Time related:_____	Item	1		
91					

92	B11.4 Notice before covering work Fixed: _____ Value related: _____ Time related: _____	Item	1		
93	B11.5 Disturbance Fixed: _____ Value related: _____ Time related: _____	Item	1		
94	B11.6 Environmental disturbance Fixed: _____ Value related: _____ Time related: _____	Item	1		
95	B11.7 Works cleaning and clearing Fixed: _____ Value related: _____ Time related: _____	Item	1		
96	B11.8 Vermin Fixed: _____ Value related: _____ Time related: _____	Item	1		
97	B11.9 Overhand work Fixed: _____ Value related: _____ Time related: _____	Item	1		
98	B11.10 Instruction manuals and guarantees Fixed: _____ Value related: _____ Time related: _____	Item	1		
99	B11.11 As built information Fixed: _____ Value related: _____ Time related: _____	Item	1		
100	B11.12 Tenant installations Fixed: _____ Value related: _____ Time related: _____	Item	1		
	B12.0 SCHEDULE OF VARIABLES				
101	B12.1 Schedule of variables Fixed: _____ Value related: _____ Time related: _____	Item	1		
	This schedule contains all variables referred to in this document and is divided into pre-tender and post-tender categories. The pre-tender category must be completed in full and included in the tender documents. Both the pre-tender and post-tender categories form part of these Preliminaries				

	<p>Spaces requiring information must be filled in, shown as "not applicable" or deleted and not left blank. Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided the information should be annexed hereto and cross-referenced to the applicable clause of the schedule. Key cross reference clauses are italicised in [ ] brackets</p> <p>12.1 PRE-TENDER INFORMATION 12.1.1 Provisional bills of quantities [2.2] The quantities are provisional</p> <p>12.1.2 Availability of construction documentation [2.3] Construction documentation is complete</p> <p>12.1.3 Interests of agents [2.4] Details:</p> <p>12.1.4 Defined works area [3.1] Details:</p> <p>12.1.5 Geotechnical investigation [3.2] Details:</p> <p>12.1.6 Existing premises occupied [3.4] Specific requirements:</p> <p>12.1.7 Previous work - dimensional accuracy [3.5] Details:</p> <p>12.1.8 Previous work - defects [3.6]Details:</p> <p>12.1.9 Services - known [3.7] Details:</p> <p>12.1.10 Protection of trees [3.9] Specific requirements:</p> <p>12.1.11 Inspection of adjoining properties [3.11] Specific requirements:</p> <p>12.1.12 Enclosure of the works [6.2] Specific requirements:</p> <p>12.1.13 Offices [6.4.3] Specific requirements: The contractor shall provide, maintain and remove on completion of the works an office for the exclusive use of the principal agent, minimum size 4 x 3 x 3m high internally, suitably insulated and ventilated, provided with electric lighting and fitted with boarded floor, desk, chair, drawing stool, drawing board and lock-up drawers for drawings. The office shall be kept clean and fit for use at all times</p>				
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--



<p>12.1.14 Main notice board [6.5] Specific requirements: The contractor shall provide, erect where directed, maintain and remove on completion of the works a notice board size 3 x 3m as type Drawing GEN 063, constructed of suitable boarding with flat smooth surface and with edging bead 19mm thick round outer edges and projecting 12mm from face of boarding and rounded on front edge. The board shall be securely fixed to hoarding, where hoarding is provided, or fixed to and including a suitable supporting structure of timber or tubular posts and braces. The board is to be painted ivory white and the bead and 12mm wide dividing lines dark green. All wording shall be inscribed in dark green as per the coat of arms for SA. All wording shall be inscribed in dark green painted sans serif lettering</p> <p>12.1.15 Subcontractors' notice board [6.6] A notice board is required</p> <p>12.1.16 Water [7.2] Option A (by contractor) YES/NO Option C (by employer - metered) YES/NO</p> <p>12.1.17 Electricity [7.3] Option A (by contractor) YES/NO Option C (by employer - metered) YES/NO</p> <p>12.1.18 Telecommunications [7.4] Telephone YES/NO Facsimile YES/NO E-mail YES/NO</p> <p>12.1.19 Ablution facilities [7.5] Option A (by contractor) YES/NO</p> <p>12.1.20 Protection of existing/sectionally occupied works [11.2] Protection is required</p> <p>12.1.21 Special attendance [9.2] Subcontractor (1) details: Subcontractor (2) details: Subcontractor (3) details:</p> <p>12.1.22 Protection of the works [11.1] Specific requirements:</p> <p>12.1.23 Disturbance [11.5] Specific requirements: The contractor shall keep the site, structures, etc well watered during operations to prevent dust and shall provide and erect and remove on completion of the works all necessary temporary dust screens all to the satisfaction of the principal agent</p> <p>12.1.24 Environmental disturbance [11.6] Specific requirements:</p>				
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>12.2 POST-TENDER INFORMATION</p> <p>12.2.1 Payment of preliminaries [10.2] Option A (prorated) Option B (calculated) YES/NO</p> <p>12.2.2 Adjustment of preliminaries [10.3] Option A (three categories) YES/NO</p> <p>12.2.3 Additional agreed preliminaries items Details:</p> <p>SECTION C: SPECIFIC PRELIMINARIES</p> <p>Section C contains specific preliminary items which apply to this contract except where N/A (Not Applicable) appears against an item</p> <p>C1.0 CONTRACT DRAWINGS* Select relevant paragraph and delete whichever is not applicable depending on whether the contract is based on a bills of quantities or lump sum document* 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* A full set of drawings is issued with the tender documents indicating the full scope of the work to enable the tenderer to acquaint himself with the nature and extent of the works and the manner in which they are to be executed Should any part of the drawings not be clearly understood by the tenderer he shall, before submitting his tender, obtain clarification in writing from the principal agentFixed: _____ Value related: _____</p>				
102	<p>Time related: _____</p> <p>C2.0 GENERAL PREAMBLES The document "Specification of Materials and Methods to be used (PW371)" is obtainable on the Department's website (<a href="http://www.publicworks.gov.za/">http://www.publicworks.gov.za/</a> under "Consultants Guidelines"), and shall be read in conjunction with the bills of quantities / lump sum document and be referred to for the full descriptions of work to be done and materials to be used Fixed: _____ Value related: _____</p>	Item		1	
103	<p>Time related: _____</p>	Item		1	

104	<p>C3.0 TRADE NAMES Wherever a trade name for any product has been described in the bills of quantities / lump sum document, the tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the principal agent being obtained prior to the closing date for submission of tenders If prior written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		
105	<p>C4.0 IMPORTED MATERIALS AND EQUIPMENT Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations. (refer to Schedule of Imported Materials and Equipment DPW-23(EC) to be completed by tenderer) 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) Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		
106	<p>C5.0 VIEWING THE SITE IN SECURITY AREAS The site is situated in a security area and the tenderer must arrange with the unit commander or other responsible officer to obtain permission to enter the site for tendering purposes Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		
107	<p>C6.0 COMMENCEMENT OF WORKS IN SECURITY AREAS As the works falls within a security area the contractor must give the unit commander or other responsible officer notice before commencement of the works. Should the contractor fail to make such arrangements, admission to the site may be refused and any additional costs will be for the contractor's account Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		

108	<p>C7.0 ENTRANCE PERMITS TO SECURITY AREAS As the works falls within a security area the contractor shall obtain entrance permits for his personnel and workmen entering the area and shall comply with all regulations and instructions which may be issued from time to time regarding the protection of persons and property under the control of the Defence Force, Police or chief security officer          Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		
109	<p>C8.0 SECURITY CHECK OF PERSONNEL 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 Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		
110	<p>C9.0 PROHIBITION ON TAKING OF PHOTOGRAPHS In terms of article 119 of the Defence Act, 44 of 1957, it is prohibited to sketch or to take photographs of any military site or installation or any building or civil works thereon or to be in possession of a camera or other apparatus used for taking of photographs except when authorized thereto by or on behalf of the Minister The same prohibition is also applicable to all correctional institutions in terms of article 44.1(e) of the Correctional Services Act 8 of 1959          Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		

111	<p>C10.0 HIV/AIDS AWARENESS It is required of the contractor to thoroughly study the HIV/AIDS Specification (PW 1544) of the Department that must be read together with and is deemed to be incorporated under this Section of the bills of quantities / lump sum document. Provision for pricing of HIV/AIDS awareness is made under items C10.1 to C10.5 hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained The contractor must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of clause A 31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment</p> <p>C10.1 AWARENESS CHAMPION Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification Fixed:_____ Value related:_____ Time related:_____</p> <p>C10.2 AWARENESS WORKSHOPS Selection and appointment of a competent Service Provider approved by the principal agent, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-media techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification Fixed:_____ Value related:_____ Time related:_____</p> <p>C10.3 POSTERS, BOOKLETS, VIDEOS, ETC. Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period, all in accordance with the HIV/AIDS Specification Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
		Item	1		
		Item	1		

	<p>C10.4 ACCESS TO CONDOMS Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period, all in accordance with the HIV/AIDS Specification  Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		
	<p>C10.5 MONITORING Monitoring HIV/AIDS awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification  Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		
112	<p>OHS EDITION 23 - CODE OF PRACTICE APPLIES  C11.0 OCCUPATIONAL HEALTH AND SAFETY ACT The contractor shall comply 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) It is required of the contractor to thoroughly study the Health and Safety Specification that must be read together with and is deemed to be incorporated under this Section of the bills of quantities / lump sum document The contractor must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, the principal agent, notwithstanding the provisions of clause A31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the contractor provides satisfactory proof of compliance. The contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained Fixed: _____ Value related: _____ Time related: _____</p>	Item	1		

113	<p>C11.1 NOTIFICATION OF CONSTRUCTION WORK          (Construction Regulation 4) The Contractor shall, before commencing work, notify the Department of Labour of the intended construction work in terms of Regulation 4. The Contractor shall submit the notification in writing, on the appropriate form, prior to commencement of work          Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
114	<p>C11.2 HEALTH AND SAFETY PLAN (Construction Regulation 7(1))          (a) The Contractor shall provide and demonstrate to the Principal Agent a suitable and sufficiently documented health and safety plan based on the Act, Construction Regulations and the health and safety specification, which shall be applied from the date of commencement of and for the duration of the construction work. The Contractor shall ensure that a copy of the health and safety plan is available on request to an employee, inspector, sub contractor or principal agent all in terms of Regulation 5          Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
115	<p>C11.3 REGISTRATION WITH THE COMPENSATION FUND          (Construction Regulation 7(1)(c)(iv) The Contractor shall provide proof of his registration and good standing with the Compensation Fund or a licensed compensation insurer prior to the commencement of work          Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
116	<p>C11.4 HEALTH AND SAFETY FILE ( Construction Regulation 7(1)(b) The Contractor shall ensure that a health and safety file, which shall include all documentation required in terms of the health and safety specification, the Act and the Construction Regulations, is opened and kept on site and made available to the Principal Agent or Inspector upon request. Upon completion of the works, the Contractor shall hand over a consolidated health and safety file to the principal agent          Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		

117	<p>C11.5 SUPERVISION OF CONSTRUCTION WORK (SAFETY OFFICER) (Construction Regulation 8.5(6) The Contractor shall appoint a full-time competent employee in writing as the construction supervisor, with the duty of supervising the construction work. The Contractor shall appoint a full-time or part-time construction safety officer in writing to assist in the control of all safety related aspects on the site. Such appointments are required to ensure that at all times the requirements of the Act and Construction Regulations are adhered to. Refer to Regulation 8.5 Fixed:_____</p> <p>Value related:_____ Time related:_____</p>	Item	1		
118	<p>C11.6 RISK ASSESSMENT FOR CONSTRUCTION (Construction Regulation 9) Before commencing work the Contractor shall cause a risk assessment to be performed by a competent person appointed in writing and the risk assessment shall form part of the health and safety plan. A copy of the risk assessment shall be available on site at all times for inspection. The Contractor shall at all time carry out the works in a manner to avoid the risk of bodily harm to persons or risk of damage to any property. He shall take all precautions regarding training of employees in any hazards and the related work procedures, health and safety induction training of employees, visitors or any other persons entering the site and provide personal protective equipment to all employees and visitors to site which are necessary and adequate to eliminate any conditions which contribute to the risk of injury to persons or damage to property in terms of Regulation 9 Fixed:_____</p> <p>Value related:_____ Time related:_____</p>	Item	1		
119	<p>C11.7 SIGNIFICANT HAZARDA IDENTIFICATION RISK ASSESSMENT PREPARED BY THE DESIGN CONSULTANTS The contractor shall allow for additional financial provision, if any, to take the necessary precautions regarding the significant hazards and risks identified and assessed by the design consultants Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		



120	<p>C11.8 ADDITIONAL FINANCIAL PROVISION The Contractor shall allow for additional financial provision, if any, to comply with the requirements of the Occupational Health and Safety Act (Act No 85 of 1993) and the Construction Regulations issued there under which have not been specifically elsewhere provided Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
121	<p>C11.9 FALL PROTECTION PLAN (Construction Regulation 10) The contractor shall, before commencing any construction work submit a fall protection plan identified all steps to be taken in order to ensure the continued adherence to the fall protection plan and shall include a risk assessment of all work carried out from an relevant position. The fall protection plan shall form part of the health and safety plan and file Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
122	<p>C11.10 PHYSICAL AND PSYCHOLOGICAL FITNESS (Construction Regulation 7(8)) The contractor and sub-contractors shall before commencing any construction work submit proof of his employees that shall carried out work from an elevated position their physical and psychological fitness. And shall be recorded in the health and safety file Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
123	<p>C11.11 CONSTRUCTION VEHICLES AND MOBILE PLANT (Construction Regulation 23) The contractor and sub-contractors shall ensure that all operated workers received training and been certified competent to operate such vehicle, and are physical and psychological fit to operate such construction vehicles and mobile plants. And shall be recorded in the health and safety file Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
124	<p>C11.12 TRAINING (Construction Regulation 8 (c)) The contractor and sub-contractors shall, before commencing any construction work, submit his training program of all his employees. This program shall from part of the health and safety plan Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		

125	<p>C11.13 DEMOLITION WORK (Construction Regulation 14)          The contractor shall, before any demolition work shall carried out, submit all method of demolition to be used. This method shall form part of the health and safety plan and file.          Fixed:_____ Value related:_____ Time related:_____</p>	Item	1		
126	<p>C11.14 REMOVAL AND DISPOSAL OF ASBESTOS MATERIAL (Asbestos Regulation) The principle contractor shall appoint a contractor that is registered with theDepartment of Labour as an AIA. The contractor must allow for; NOTIFICATION OF ASBESTOS PROCESSINGPERSONAL PROTECTIVE EQUIPMENTPACKAGING AND TRANSPORT AND STORAGE TO DISPOSAL SITEDEMOLITION WORK OF SHEETSLABELLING AND INFORMATIONFixed:_____ Value related:_____ Time related:_____</p>	Item	1		
Carried to Summary					R

BILL NO.	SECTIONAL NO. 1 SUMMARY	PAGE NO.			AMOUNT
1	Total Brought Forward from Page no.	4			R
2	Total Brought Forward from Page no.	5			R
3	Total Brought Forward from Page no.	8			R
4	Total Brought Forward from Page no.	9			R
5	Total Brought Forward from Page no.	12			R
6	Total Brought Forward from Page no.	13			R
7	Total Brought Forward from Page no.	14			R
8	Total Brought Forward from Page no.	16			R
9	Total Brought Forward from Page no.	17			R
10	Total Brought Forward from Page no.	18			R
11	Total Brought Forward from Page no.	19			R
12	Total Brought Forward from Page no.	20			R
13	Total Brought Forward from Page no.	21			R
14	Total Brought Forward from Page no.	22			R
15	Total Brought Forward from Page no.	23			R
16	Total Brought Forward from Page no.	26			R
14	Total Brought Forward from Page no.	27			R
15	Total Brought Forward from Page no.	28			R
16	Total Brought Forward from Page no.	29			R
17	Total Brought Forward from Page no.	30			R
18	Total Brought Forward from Page no.	31			R
19	Total Brought Forward from Page no.	32			R
20	Total Brought Forward from Page no.	33			R
21	Total Brought Forward from Page no.	34			R
Carried to Final Summary					R

**SECTION NO. 2**

**BILL NO. 1**

**FOUNDATIONS (PROVISIONAL)**

**EARTHWORKS**

**PREAMBLES**

For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"

**SUPPLEMENTARY PREAMBLES**

Classification of excavated material

"Hard rock" shall mean granite, quartzitic sandstone or other rock of similar hardness, the removal of which requires drilling, wedging and splitting or the use of explosives "Soft rock" shall mean hard material, the removal of which warrants the use of pneumatic tools and includes hard shale, ferricite, compact oukclip and material of similar hardness "Earth" shall mean all ground other than that classified as "hard rock" or "soft rock" and shall include made-up ground and any loose stones or pieces of concrete not exceeding 0,03m<sup>3</sup> in volume

Applicable standards

All earthworks to be carried out in accordance with SANS 2001 - Construction works Part BE1: Earthworks (general) as well as SANS 10400-F: Site operations and SANS 10400-G: Excavations

Filling material (General)

It will be, at all times, required from the contractor to apply and execute strict quality control on all filling material used

Samples of potential fill material obtained from excavations, trench excavations, etc. are to be submitted to and approved by the principal agent prior the re-use thereof as "filling"

All filling obtained from a commercial source should comply to minimum G5 standard

	<p>Should any material be found unsuitable and the use thereof be disapproved, such material shall be disposed and approved material must be sourced and imported from an approved commercial source</p> <p>Filling in general shall be compacted to the prescribed percentage Mod AASHTO density</p> <p>Filling in sub-layers, under floors, etc</p> <p>All filling in layers under surface beds, in sub-layers, to form earth mattresses, backfilling, etc. shall be done with materials specified and according to methods prescribed by the SANS 1200ME Sub-base Specification in layers of 150mm thickness</p> <p>The aforesaid specification was drawn up to cover activities normally encountered on civil engineering work, which is equally applicable on the filling details and requirements prescribed for this project</p> <p>The said specification, although not issued with, shall be regarded to form part of these Bills of Quantities. The contractor shall obtain a copy of the said specification from the South African National Standards authority and be kept on site at all times</p> <p>CBR and indicator tests</p> <p>The contractor is to note that all necessary tests (i.e. CBR and indicator tests, etc.) are to be conducted for all filling material, whether obtained from the excavations or to be imported from an approved commercial source</p> <p>Results of these tests are to be submitted to and approved by the principal agent prior commencement of any placement thereof and/or filling done therewith</p> <p>Density tests</p> <p>Density tests for monitoring filling shall be done at the minimum prescribed frequencies per each 150mm thick layer of filling placed</p> <p>It will be required from the contractor to execute density tests for monitoring filling at the following minimum frequencies per each filling layer placed:</p>				
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>Filling under surface beds, aprons, channels, etc: 1 Test per 125m<sup>2</sup> plan area per each 150mm thick layer</p> <p>Filling behind retaining walls: 1 Tests per each 10m length of retaining wall</p> <p>Results of density tests executed are to be submitted to and approval obtained from the principal agent prior commencement of any subsequent fill layers and/or other work</p> <p>Carting away excessive and/or unsuitable excavated material</p> <p>Descriptions for "carting away excessive or unsuitable excavated material from site" shall be deemed to include the loading, hauling and off-loading of excessive or unsuitable excavated material to a suitable and approved dumping site, which has to be located by the contractor, off the premises</p> <p>The location of the intended dumping site will be subjected to the prior written approval of the principal agent</p> <p>The contractor will also be liable to, upon completion, rehabilitate all those areas of the dumping site used dumping/spoiling by grading the area to follow the adjacent ground contours and afterwards compacted to 80% Mod AASHTO density, all to the full satisfaction of the principal agent</p> <p>Tendered rates must make provision for the above-mentioned as no additional claims in this regard will afterwards be entertained</p> <p>Soil poisoning and insecticide</p> <p>All soil poisoning and insecticide to be applied under a five year guarantee by an approved firm of Specialists. Soil insecticides shall comply with SANS Specification 1165. Work shall be carried out in accordance with "The application of soil insecticides for the protection of buildings" - SANS Code of Practice 0124 Casting of concrete floors to start within 24 hours after the application of soil poisoning</p>				
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>Pest control applicators must provide :1. Proof of pesticides and insecticides (data sheets)2. Toxicants must be registered with the Department of Agriculture2. Proof that they are qualified to perform the work3. Five year guarantee certificate</p> <p>Measurement and payment</p> <p>Measurement and payment clauses as described in the above-mentioned specification, Standardized Specification for Civil Engineering Construction, shall not apply to the work as set out in this Bill</p> <p>Subterranean water</p> <p>No information regarding susterranean water is available. The tenderer must acquit himself of the presence and depth of subterranean water and allow therefore in his prices</p> <p>The following are typical examples of descriptions of "nature of ground"</p> <p><b>SITE CLEARANCE ETC</b></p> <p>Site clearance</p> <p>Digging up topsoil to an average depth of 300mm and preserving for use as filling</p> <p><b>EXCAVATIONS ETC</b></p> <p>Excavation in earth not exceeding 2m deep below NGL</p> <p>2 Trenches</p> <p>Excavation in earth exceeding 2m but n.e. 4m deep below NGL</p> <p>3 Toilet pits excavations</p> <p>Extra over trench and hole excavations in earth for excavation in</p> <p>4</p> <p>5 Soft rock</p> <p>6 Hard rock</p>				
1		m <sup>3</sup>	118		
2		m <sup>3</sup>	130		
3		m <sup>3</sup>	75		
4		m <sup>3</sup>	30		
5		m <sup>3</sup>	21		
6		m <sup>3</sup>	10		
Carried Forward					R

Brought Forward					R
	Risk of collapse of excavations				
7	Sides of hole and trench excavations n.e. 1.5m deep below NGL	m <sup>2</sup>	188		
8	Sides of bulk excavations exceeding 1.5m deep below NGL	m <sup>2</sup>	34		
9	Keeping excavations free of water	Item	1		
	<b>FILLING ETC</b>				
	Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density				
10	Under floors, steps, pavings, etc	m <sup>3</sup>	98		
11	Trenches	m <sup>3</sup>	26		
	G6 imported filling, compacted in 150mm layers to 93% Mod AASHTO density				
12	Under floors, steps, paving, etc	m <sup>3</sup>	38		
	Coarse River sand, dry and free from organic material, stones, debris etc.				
13	Under floors	m <sup>3</sup>	15		
	Soilcrete backfill 8% batch mixing				
14	To sides of toilet pit walls	m <sup>3</sup>	12.4		
	<b>WEED KILLERS, INSECTICIDES, ETC</b>				
	Weedkiller in accordance with SABS 1165				
15	Under floors	m <sup>2</sup>	364		
16	To bottoms and sides of trenches	m <sup>2</sup>	470		
	<b>CARTING AWAY</b>				
	Extra over all excavations for carting away				
Carried Forward					R



Brought Forward					R
17	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m <sup>3</sup>	72		
Carried to Summary of Section no. 2					R

SECTION NO. 2					
BILL NO. 2					
CONCRETE, FORMWORK AND REINFORCEMENT					
	<p>PREAMBLES</p> <p>For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"</p> <p>SUPPLEMENTARY PREAMBLES</p> <p>Concrete general</p> <p>Surface beds cast in panels shall be cast in panels of maximum 16m<sup>2</sup></p> <p>Concrete test cubes</p> <p>Descriptions and tendered rates for concrete strength test cubes, as required under clause 7, "Tests" of SANS 1200 G, shall be deemed to cater for all the costs of providing cube moulds necessary for the purpose, making, storing and sending thereof to an approved laboratory for testing, paying all charges in connection therewith and for submitting test result reports to principal agent and engineer</p> <p>All concrete strength test cubes, each size 150 x 150 x 150mm, shall be prepared in a set of three</p> <p>It will be required from the contractor to prepare concrete strength test cube sets for each building at the following minimum frequencies: - One set of three cubes for every 20m<sup>3</sup>, or part thereof, of concrete cast per day, or: - One set of three cubes for each batch of concrete cast per event</p>				

	<p>All concrete strength test cubes shall be labelled and the identity thereof (ie. date, concrete strength type, position where batch was cast relative to the building and building identity) shall be properly recorded for future reference</p> <p>Reinforced concrete</p> <p>All reinforced concrete is to be compacted with a mechanical vibrator</p> <p>Formwork</p> <p>Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use</p> <p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself</p> <p>Formwork to sides of bases, pile caps, ground beams, etc. will only be measured where it is prescribed by the engineer or principal agent for design reasons. Formwork necessitated by irregularities or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision which is made for in "Earthworks"</p> <p>Formwork necessitated by irregularity or collapse of excavated faces is not measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"</p> <p>Formwork to soffits of solid slabs, etc shall be deemed to be slabs not exceeding 200mm thick unless otherwise described</p> <p>Degree of accuracy of formwork: Grade 2 as SANS 1280G</p>				
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>Permissible deviations: Flatness of plain surface - 5mm          Abrupt changes in a continuous surface - 5mm</p> <p>Supervision</p> <p>A competent and experienced foreman shall supervise personally the whole of the concrete construction and pay special attention to:</p> <p>The quality, testing and mixing of materials; The placing and compaction of concrete; The construction and removal of formwork; and The sizes and position of the reinforcement</p> <p>The contractor shall obtain the permission of the engineer or principal agent before comencing concreting of foundations, surface beds and reinforced structure</p> <p>No inspection, approval, authorisation to proceed, comment or instructions following from such an inspection, or failure of the engineer or principal agent to comment on any particular aspect of the work shall be deemed to relieve the contractor in any way from his obligation to ensure through his own supervision that the work is constructed in every way in accordance with the drawings, specifications and conditions of contract, nor relieve him from his obligations to make good any fault or defect, nor shall it be deemed that there is any obligation on the engineer or principal agent to inspect all or any part of the works or that such inspection is necessarily complete in every respect</p> <p>Reinforcement</p> <p>Standard welded steel fabric reinforcement shall be as included in Table 1 of SANS 1024 and shall have 300mm wide laps The mass of binding wire is not included in the mass of the reinforcement and the cost thereof must be included in the rates for reinforcement</p>				
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<b>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</b>				
	15MPa/20mm concrete				
1	Surface blinding under slabs	m <sup>3</sup>	6		
	<b>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</b>				
	25MPa/20mm concrete				
2	Strip footings	m <sup>3</sup>	26		
3	Slabs	m <sup>3</sup>	0		
	<b>REINFORCED CONCRETE</b>				
	20MPa/20mm concrete				
4	Surface beds on waterproofing	m <sup>3</sup>	30		
5	Ramps on waterproofing, to falls	m <sup>3</sup>	1		
6	Aprons on waterproofing, to falls	m <sup>3</sup>	0		
7	Slabs	m <sup>3</sup>	0		
	30MPa/20mm concrete				
8	Slabs	m <sup>3</sup>	6		
	<b>CONCRETE SUNDRIES</b>				
	Finishing top surfaces of concrete smooth with a wood or steel trowel				
9	Surface beds, aprons etc.	m <sup>2</sup>	270		
10	Vanity Slabs, cupboard slabs, cover slabs, etc	m <sup>2</sup>	22		
	<b>TEST CUBES</b>				
	Making and testing 150 x 150 x 150mm concrete strength test tubes				
11		No.	8		
	<b>ROUGH FORMWORK (DEGREE OF ACCURACY II)</b>				
	Rough formwork to sides				
	Edges, risers, ends and reveals not exceeding 300mm high or wide				
12		m	38		
	<b>FORMWORK LEFT IN</b>				
	Rough formwork to soffits				
13	Soffits of toilet pit slabs	m <sup>2</sup>	16		
Carried Forward					R

Brought Forward					R
	<b>MOVEMENT JOINTS</b>				
	Control joints				
14	40 x 3mm saw cut joints in top of concrete (Provisional)	m <sup>2</sup>	22		
	Expansion joints				
15	20mm x 125/150mm deep control joint, filled with "Jointex" closed cell polyethylene joint filler or similar approved, and finished off with two part 20 x 15mm deep polyurethane joint sealant, with aris to be rounded 3mm radius (Provisional)	m	5		
	<b>REINFORCING</b>				
	Fabric reinforcement				
16	Type 193 Fabric reinforcement in surface beds, slabs etc	m <sup>2</sup>	298		
17	Type 395 Fabric reinforcement in surface beds, slabs etc.	m <sup>2</sup>	0		
18	Type 617 Fabric reinforcement in surface beds, slabs etc.	m <sup>2</sup>	0		
	Steel reinforcement to structural concrete work				
19	Y10 steel bars	t	0		
20	Y12 steel bars	t	1.8		
21	Y16 steel bars	t	0.88		
	<b>PAVING (Provisional)</b>				
	60mm Thick precast concrete interlocking block paving of 200 x 100mm grey paving blocks in accordance with SANS 1058, laid to falls on and including 20mm thick sand layer with joints filled in with sand, compacted with vibration compactor.				
22	Paving to Play Area etc, to falls	m <sup>2</sup>	42		
Carried to Summary of Section no. 2					R

SECTION NO. 2					
BILL NO. 3					
MASONRY					
	<p>SUPERSTRUCTURE</p> <p>PREAMBLES</p> <p>For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"</p> <p>SUPPLEMENTARY PREAMBLES</p> <p>Sizes in descriptions</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>Mortar</p> <p>The materials shall be mixed dry until of uniform colour, water added and the mixture turned over until the ingredients are thoroughly incorporated Mortar shall be produced in such quantities as can be used before commencement of set and no mortar that has set shall be used Mortar plasticizers may only be used with the approval of the principal agent</p> <p>Mortar test cubes</p> <p>Descriptions and tendered rates for mortar strength test cubes, as required by the principal agent, shall be deemed to cater for all the costs of providing cube moulds necessary for the purpose, making, storing and sending thereof to an approved laboratory for testing, paying all charges in connection therewith and for submitting test result reports to principal agent</p> <p>It will be required from the contractor to prepare mortar strength test cubes for each building at a frequency as decided upon by the principal agent</p>				

<p>All mortar strength test cubes shall be labelled and the identity thereof (ie. date, mortar strength type, position where batch was taken from relative to the building and building identity) shall be properly recorded for future reference</p> <p>Brickwork</p> <p>Brickwork shall be built in stretcher bond. Unless legitimately required to form bond, no false headers shall be used Bricks shall be laid on a solid bed of mortar and all joints shall be grouted up solid. Mortar joints shall be not less than 8mm or more than 12mm thick Brickwork shall be carried up in a uniform manner, no part being raised more than 1.2m above adjoining brickwork</p> <p>Bricks shall be wetted before being laid and the course of bricks last laid shall be well wetted before laying a fresh course upon it</p> <p>Brickwork reinforcement</p> <p>Brickwork reinforcement shall be manufactured from hard drawn steel wire conforming to BS 785 and shall consist of two 2.8mm diameter main wires with 2.5mm cross wires at 300mm centres welded at intersections Reinforcement shall be lapped not less than 300mm at end joints and for a length equal to the width of the widest reinforcement at intersections</p> <p>Centres and turning pieces</p> <p>Centres and turning pieces to soffits of arches and lintels shall be left in position for not less than 14 days</p> <p>Face bricks</p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour Facing bricks shall exhibit a liability to efflorescence not in excess of "slight" and water absorption when tested in conformity with the requirements of SANS 227 shall not exceed 14%</p> <p>Particular care shall be taken to preserve arrisses and faces of face and paving bricks during transit and handling</p>				
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>Face brickwork shall be built in stretcher bond, unless otherwise specified, to a true and fair face. Perpend shall be vertically aligned Facing bricks shall be mixed to ensure that the proper blending of bricks within the colour range of each facing brick used is obtained</p> <p>All cutting to face bricks must be done by cutting saw and prices to include for the use of mechanical cutting saws</p> <p>Pointing</p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc</p> <p>Samples</p> <p>Samples of all masonry building units, except for walls described as "load bearing" shall consist of a minimum of 6 units. Samples of building units to be used in walls described as "load bearing" shall consist of 30 units from every 30 000 units delivered to site</p>				
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--



	Blockwork of M200 blocks (5MPa nominal compressive strength) in class II mortar, filled solid with 20MPa concrete				
1	One brick walls	m <sup>2</sup>	46		
	Brickwork of NFX bricks (14MPa nominal compressive strength) in class I mortar				
2	One brick walls	m <sup>2</sup>	143		
	<b>SUPERSTRUCTURE</b>				
	Brickwork of NFP bricks in class II mortar				
3	Half brick walls	m <sup>2</sup>	28		
4	One brick walls	m <sup>2</sup>	128		
5	Half brick walls in beamfilling	m <sup>2</sup>	31		
6	Mass brickwork	m <sup>3</sup>	0		
	<b>FACE BRICKWORK</b>				
	Face bricks pointed with recessed horizontal and vertical joints, of "Corobrik Firelight Satin", or similar approved				
7	Extra over Brickwork for Face brickwork	m <sup>2</sup>	224		
8	Extra over Brickwork for Face brickwork in beam filling	m <sup>2</sup>	22		
9	Brick-on-edge header course lintel pointed on face and 115mm soffit	m	22		
10	Brick-on-edge header course lintel pointed on face and 230mm soffit	m	22		
11	Brick-on-edge window cill, set sloping and slightly projecting with pointing to top, front, and underside of projection	m	25		
	Sundries				
12	Clean raking cutting to face brickwork	m	128		
	<b>BRICKWORK SUNDRIES</b>				
	2.5mm Brickwork reinforcement				
13	75mm Wide reinforcement built in horizontally	m	142		
14	150mm Wide reinforcement built in horizontally	m	880		
15	Airbricks	No.	12		
Carried Forward					R

Brought Forward					R
	Turning pieces				
16	110mm wide Turning piece to lintels etc.	m	30		
17	230mm wide Turning piece to lintels etc.	m	14		
	Galvanized wire ties, etc.				
	1.6mm thick Galvanized hoop iron 32mm wide, built 750mm deep into brickwork, wrapped over truss and fixed with four				
18	galvanized nails 40mm long	No.	22		
	Mild steel brickwork reinforcement				
19	8mm mild steel bars built into brick-on-edge lintels, cills etc.	t	0.9		
Carried to Summary of Section no. 2					R

SECTION NO. 2					
BILL NO. 4					
WATERPROOFING					
	<p><b>PREAMBLES</b></p> <p>For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"</p> <p><b>SUPPLEMENTARY PREAMBLES</b></p> <p>Damp-proof course to walls</p> <p>All joints in damp-proof course to walls shall be lapped a minimum of 150mm except at junctions and corners where the lap should be equal the full thickness of the wall</p> <p>Waterproofing</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><b>DAMPPROOFING OF WALLS AND FLOORS</b></p> <p>One layer of 375 micron "Consol Plastics Brikgrip DPC" embossed damp proof course</p>				
1	In walls	m <sup>2</sup>	50		
2	Under surface beds	m <sup>2</sup>	260		
3	Under ramps, laid to falls n.e 25 degrees	m <sup>2</sup>	22		
Carried Forward					R

Brought Forward					R
	<b>WATERPROOFING OF BASEMENT</b>  Prime with one coat bitumen primer and one layer 4mm fully bonded waterproof membrane comprising two bitumen layers reinforced with woven spunbonded polyester fabric and coated with polyethelene film for heat bonding, laid with 100mm side 150mm end laps				
4	On floors	m <sup>2</sup>	20		
5	On walls	m <sup>2</sup>	40		
6	On turn-up and downs exceeding 300mm girth	m <sup>2</sup>	6		
Carried to Summary of Section no. 2					R

SECTION NO. 2					
BILL NO 5					
ROOF COVERINGS, CLADDINGS, ETC					
	<p><b>PREAMBLES</b></p> <p>For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"</p> <p><b>SUPPLEMENTARY PREAMBLES</b></p> <p>General</p> <p>Roof covering must be done by a specialist. A written 5-year guarantee certificate must be issued on completion thereof</p> <p>Prices to include for all cutting and waste and relevant fixing material, unless otherwise described</p> <p>Sizes</p> <p>All items are measured net unless otherwise described</p> <p>Where battens for roof coverings form part of the plate nailed timber roof truss design it shall be included under the roof construction in the "Carpentry and Joinery" trade and not under this trade</p> <p><b>PROFILED METAL ROOF SHEETING</b></p> <p>0.55mm "Safintra AZ150 Zincal Widedek" profiled roof sheeting, fixed to intermediate timber purlins at max. 1700mm centres and to ridge and eaves purlins at max. 1500mm centres, fixed with 12 x 65mm "Fixtite" or Safintra approved hex head self-drilling fasteners, fixed according to manufacturer's specifications</p>				
1	Roof coverings with pitches n.e. 25 degrees	m <sup>2</sup>	363		
	<p><b>PROFILED METAL SHEETING ACCESSORIES</b></p> <p>0.55mm "Safintra" sheet metal roof accessories</p>				
2	Ridge flashing, 462mm girth	m	30		
3	Broad flute closers and polyethylene closers	m	30		
Carried Forward					R

Brought Forward					R
	<b>ROOF AND WALL INSULATION</b>  "Sisalation 410" housing grade glass fibre reinforced aluminium foil bonded insulation  Insultion laid taut over purlins (at approximately 1100mm centres) and fixed concurrent with roof covering including galvanised steel straining wires	m <sup>2</sup>	363		
Carried to Summary of Section no. 2					R

SECTION NO. 2					
BILL NO. 6					
CARPENTRY AND JOINERY					
	<b>ROOFS, ETC</b>  <b>PREAMBLES</b>  For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"  <b>SUPPLEMENTARY PREAMBLES</b>  <b>ROOF TRUSSES</b>  Pre-fabricated metal connected timber roof trusses  All trusses shall be fabricated by an approved truss manufacturer who holds a current Certificate of Competence awarded by the Institute for Timber Construction  Trusses should be handled and erected in accordance with SANS 10243  Timber  Timber for trusses to be South African softwood and shall be in accordance with the grades as defined in SANS Specification No 563 or as defined in SANS Specification No 1460  Bolts  Bolts shall be in accordance with BS 4190 or SANS 135				

<p>Shear plates, tooth connectors and split rings</p> <p>Shear plates, tooth connectors and split rings shall be in accordance with BSS 1759 : 1960 and installed in accordance with the CSIR Publication HOUT 468, "The Design, Manufacturing and Erection of Timber Trusses"</p> <p>Washers</p> <p>Square or round washers of the following dimensions shall be used with all bolts:</p> <ol style="list-style-type: none"> <li>1. Bolts up to 8mm diameter: Washers shall be minimum 25mm wide of minimum 2,50mm thickness</li> <li>2. Bolts up to 12mm diameter: Washers shall be minimum 36mm wide of minimum 4,00mm</li> <li>3. Bolts up to 20mm diameter: Washers shall be minimum 60mm wide of minimum 5,00mm thickness</li> </ol> <p>Metal connector plates</p> <p>Metal connector plates shall be fabricated out of not less than 1mm thick drawn quality galvanised steel</p> <p>The steel shall have a minimum yield strength of 228MPa and a minimum ultimate tensile strength of 330MPa. The corrosion resisting coating shall be not less than 275g/m<sup>2</sup> commercial class hot dipped galvanising as per SANS 934 before stamping</p> <p>All connector plates shall have been tested by the CSIR and be of a size capable of transmitting the forces between members of a truss without exceeding the design values published in the CSIR report</p> <p>Truss construction</p> <p>Trusses shall be constructed in jigs specially designed to ensure the correct profile, overhangs and cambers</p> <p>Where metal connector plates are used all joints are to be close fitted butt joints made by precision pressing of the metal connector plates into each side of the joint</p> <p>Truss design</p>				
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>All trusses shall be designed by a registered Professional Engineer in accordance with SANS 0163 ("Design of Timber Structures") and Code 0160 ("Loadings")</p> <p>Truss spacing</p> <p>The truss centres shall be less than or equal to that as described in this bill for each respective truss</p> <p>Truss pitch</p> <p>The truss pitch shall be as described in this bill for each respective truss type</p> <p>Truss loading</p> <p>Trusses shall be designed for a live load of 0,50kN/m2 and dead load as specified below</p> <p>Shop drawings, design and erection guarantee certificates</p> <p>It will be expected from the contractor to timeously prepare, submit and obtain the necessary approvals from the principal agent in respect of the required shop drawings, design and erection guarantee certificates as specified</p> <p>Dimensions</p> <p>All dimensions given in the descriptions of the trusses are nominal and actual measurements are to be obtained by actual measurements taken on the site before design or fabrication commences</p> <p>Erection</p> <p>All trusses are to be hoisted and erected strictly in accordance with the procedures and recommendations of the manual "The Erection and Bracing of Timber roof Trusses" as published by the Institute for Timber Construction and the CSIR, or the SABS Code of Practice "The Design, Manufacture and Erection of Timber Roof Trusses", or as designed and detailed by the designer</p>				
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--



	<p>Design system</p> <p>The design system as documented in this bill is based on the "TRi design 3000" system and all references given in the descriptions are related to specific type of trusses based on this design system</p> <p>However, the contractors is to note that any design system of similar quality may be used subject to the prior written approval of the principal agent</p> <p>Both the design and guarantee for the prefabricated timber roof construction complete, (excluding battens and/or purlins) to be designed, constructed and delivered to site by an approved firm of specialists, under a written guarantee, which shall be lodged with the principal agent for approval before the work commence</p> <p>Rates</p> <p>Tendered rates to include for the complete roof construction, including the design of the roof construction, all timber of required grade and type shown on the design, all cutting and waste, cutting to the exact lengths and end angles to manufacture the respective truss type, supply of all connector plates, prefabrication of trusses in a jig, checking the completed truss for quality, loading up, transporting to the site of the works (cost of girder trusses to include cost of required metal truss hangers), etc</p> <p>Prices for trusses must also include for:</p> <ol style="list-style-type: none"> <li>1. Unloading and storing under cover and protecting from the weather, or handing over to others for unloading and storing as required</li> <li>2. Hoisting up and erecting the trusses at the required truss centres, truly plumb and square on top of wall plates, all in accordance with site instructions for erection, bracing and holding down and connections supplied by the truss fabricator for use by:       <ol style="list-style-type: none"> <li>2.1 themselves (when responsible for erection)</li> <li>2.2 others (where applicable)</li> </ol> </li> </ol>				
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

<p>3. Such site supervision as deemed necessary by the fabricator of the trusses to ensure that all the erection details have been complied with to his satisfaction</p> <p>Fixing of purlins</p> <p>All purlins must be properly nailed to roof trusses and thereafter secured to rafters with 2mm thick galvanised wire ties wrapped around rafter with ends tied together and prices for trusses to include therefor</p> <p>GENERAL CARPENTRY AND JOINERY</p> <p>Fixing</p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete</p> <p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at maximum 600mm centres, and where described as "bolted" the bolts have been given elsewhere</p> <p>Joinery</p> <p>Descriptions of frames shall be deemed to include frames, transomes, mullions, rails, etc</p> <p>Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes</p> <p>Particle board</p> <p>Particle board shall comply with the following specifications: a) SANS 1300 Particle board: exterior and flooring type b) SANS 1301 Particle board: interior type</p> <p>Decorative laminate finish</p> <p>Decorative laminate finishes shall be glued under pressure</p> <p>All edge strips shall be butt jointed at junctions with adjacent similar finish</p> <p>Hardwoods</p>				
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>All hardwoods shall be specially selected, well seasoned, free from sapwood and kiln dried. Meranti shall be Red or Medium Brown Meranti, even in grain and colour, selected from "Standard and Better" quality from Malaysia</p> <p>Sealing of all abutments</p> <p>All cupboards, counter tops, shelves, etc. abutting walls, tiled surfaces, etc. to be sealed watertight with an approved silicon sealant along all joints</p> <p>Tendered rates must make provision for this as no additional claims in this regard will afterwards be entertained</p> <p>Plate nailed timber roof truss construction</p> <p>The following is applicable in respect of roof trusses:Trusses are at maximum 1,10m centresRoof covering is galvanised "IBR" roof sheeting with "Globalcoat" finish on one side on 50 x 75mm purlins at 1,1m maximum centres.Ceilings are generally 6,4mm gypsum plasterboard on 38 x 38mm brandering.All timber to be sawn softwood in accordance with V4 or M4 as defined in SABS 563 or SABS 1245.Metal connector plates shall have a minimum yield strength of 228 MPa and a minimum ultimate tensile strength of 330 Mpa with hot-dip galvanised finish.All joints to be close fitted butt joints.Trusses shall be designed by a registered supplier of prefabricated trusses who shall issue an Engineers Certificate upon completion of the installation. The dimensions in the descriptions of the trusses are nominal and actual measurements are to be obtained on site before design or fabricaton commences.Tenderers must study the roof plan and sections as attached to the back of these bills of quantities (refer items CLASS-2 - 001 to 002) and must obtain prices from a qualified and registered roof truss supplier as no claims in this regard will be entertained.</p> <p><b>PLATE NAILED TIMBER ROOF TRUSSES</b></p> <p>Plate nailed timber roof truss construction</p>				
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

1	Roof truss construction to "Students' Ablutions": consisting of howe trusses at 17.5° pitch, with bottom cord spanning 3380mm and truss height 950mm high overall, top cord with 600mm eaves overhang projecting both sides, fixed approximately 2.6m above ground level	No.	6		
2	Roof truss construction to "Students' Classroom and Ablutions": consisting of howe trusses at 17.5° pitch, with bottom cord spanning 4560mm and truss height 950mm high overall, top cord with 600mm eaves overhang projecting both sides, fixed approximately 2.6m above ground level	No.	24		
3	Sawn structural timber in lengths exceeding 2.4m but n.e. 3.9m				
3	50 x 76mm S.A.P Purlin, at max 1200mm centre to centre	m	160		
4	114 x 38mm S.A.P Wall plate	m	64		
5	38 x 114mm S.A.P Bracing	m	0		
6	38 x 38mm S.A.P Trimming batten	m	0		
<b>DOORS</b>					
Timber doors fixed to steel frames					
7	813 x 2030 x 40mm "TDM" hardwood BB doors, consisting of a SAP sub frame with double top and bottom rails, tongue and groove boarding in vertical joint rails, 20 x 150mm middle ledge and 20 x 110mm braces (D1)	No.	6		
8	936 x 2030 x 40mm "TDM" hardwood BB doors, consisting of a SAP sub frame with double top and bottom rails, tongue and groove boarding in vertical joint rails, 20 x 150mm middle ledge and 20 x 110mm braces (D2)	No.	3		
Carried Forward					R

Brought Forward					R
	<b>PLASTIC, FIBRE-CEMENT, ETC</b>  PVC barge boards  225 x 75 x 9mm "Marley: PVC-U Barge Board" or similar approved, including "Marley: BBCON" or similar approved barge connectors, boards drilled for and fixed with hot-dipped galvanised screws and washers, and finished off with 9 "Marley" or similar approved endcaps  PVC fascia board  225 x 75 x 9mm "Marley: PVC-U Fascia Board" or similar approved, including "Marley: FBCON" or similar approved fascia connectors, boards drilled for and fixed with hot-dipped galvanised screws and washers, and finished off with 10 "Marley" or similar approved endcaps	m	42		
		m	62		
Carried to Summary of Section no. 2					R

<b>SECTION NO. 2</b>  <b>BILL NO. 7</b>  <b>CEILINGS, PARTITIONS AND ACCESS FLOORING</b>					
	<b>CEILINGS ETC</b>  NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 129 for CPAP formula purposes  <b>PREAMBLES</b>  For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"  <b>SUPPLEMENTARY PREAMBLES</b>  Descriptions:  Fixing				

	<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted" the bolts have been given elsewhere</p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete</p> <p>Ceilings</p> <p>Unless otherwise described ceilings shall be deemed to be horizontal</p> <p>Bulkheads</p> <p>Unless otherwise described bulkheads shall be deemed to be horizontal along the length</p> <p>Steel components</p> <p>All steel components for ceilings, partitions, etc are to be galvanised in accordance with SANS 121</p> <p><b>NAILED UP CEILINGS</b></p> <p>6.4mm "Gyproc Rhinoboard" plasterboard ceiling, with H-profile pressed steel connecting strips</p> <p>Horizontal ceilings nailed up, fixed to 38 x 38mm sawn softwood brandering at 400mm centre to centre in one direction</p> <p><b>CEILING INSULATION</b></p> <p>Isotherm insulation</p> <p>100mm thick "Isotherm" thermal polyester blanket laid between tie beams</p> <p><b>CORNICES</b></p> <p>Gypsum plasterboard cornices</p> <p>75mm coved gypsum Cornice, nailed</p> <p><b>SHELVING AND RACKS</b></p>				
1		m <sup>2</sup>	190		
2		m <sup>2</sup>	190		
3		m	76		
Carried Forward					R

Brought Forward					R
	Wooden wall mounted 600mm x 32mm shelves and rack in the classroom, including 600mm x 64mm granite worktop.				
4	Shelving and rack boards	m	55		
5	600mm x 32mm Granite Worktop	m	14		
6	Pin board as per the KZN DoE specifications	No.	4		
7	Chalkboard as per the KZN DoE specifications	No.	2		
Carried to summary of Section no. 2					R

SECTION NO. 2					
BILL NO. 8					
IRONMONGERY					
	<p><b>PREAMBLES</b></p> <p>For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"</p> <p>NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 132 for CPAP formula purposes</p> <p><b>SUPPLEMENTARY PREAMBLES</b></p> <p>Finishes to ironmongery</p> <p>Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black PB Polished brass PL Polished and lacquered PT Epoxy coated SD SandedNP Nickle plated</p>				

	<b>LOCKS</b>				
1	SS Sash lock, with CH striking plate, and including two keys	No.	5		
	<b>HANDLES</b>				
2	20mm Ø x 170mm long SC lever Handle on and including backplate with cylinder key cutout (half set)	No.	4		
	<b>SUNDRIES</b>				
3	24 x 45mm SS floor mounted Door stop	No.	9		
	Grab rails for teacher / paraplegic toilets				
4	32mm Ø SC Side grab rail size 300 x 300 x 300mm, plugged and screwed to wall with SS screws	No.	1		
5	32mm Ø SC Cistern back rail size 206 x 800mm, plugged and screwed to wall with SS screws	No.	1		
6	32mm Ø SC Straight grab rail size 95 x 750mm, plugged and screwed to wall with SS screws	No.	1		
	<b>FITTINGS</b>				
7	SS single Toilet roll dispenser, plugged into wall	No.	5		
8	SS Hand soap dispenser, plugged into wall	No.	2		
Carried to Summary of Section no. 2					R
<b>SECTION NO. 2</b>					
<b>BILL NO. 9</b>					
<b>METALWORK</b>					
	<b>PREAMBLES</b>				
	For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"				
	<b>SUPPLEMENTARY PREAMBLES</b>				
	Primer				



	<p>All surfaces of steelwork cleaned and prepared by wire brushing in accordance with SANS 10064 and all surfaces shall be painted with approved factory etch primer to a minimum dry film thickness of 30 micrometres before leaving the workshop of the manufacturer All scratches, chips or blemishes to be made good on site after erection All rates tendered must make provision for this as no claim will afterwards be entertained.</p> <p>Descriptions</p> <p>No allowance has been made in the mass of steel for rolling margins, rivets, additional materials in welding, decorative or protective treatment nor constructional aids</p> <p>Descriptions of bolts shall be deemed to include nuts and washers Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork and concrete</p> <p>Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described</p> <p>Welded joints and intersections</p> <p>Prices of continuous rails shall include for welded joints in the length and prices of intersections shall include all cutting, mitring, scribing, shaping, etc</p> <p>Bends, knees, ramps and the like to continuous rails shall be forged and rounded to approved radii</p> <p>Prices for balustrades, burglar guards and the like shall include for framed and welded joints at intersections</p> <p>Screws and bolts</p> <p>Screws and bolts shall be of corresponding metal and colour and heads of screws shall be countersunk. Self-tapping screws shall, unless described otherwise, be used for screwing items to adjoining metalwork. Stainless steel screws shall be used for fixing aluminium</p> <p>Items fixed to adjoining metalwork with rivets, self-tapping screws, machine screws, etc shall include all necessary drillings</p>				
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>Where bolting is specified, projecting shank ends of bolts shall be cut off flush and left smooth</p> <p>Door frames</p> <p>Unless otherwise described, the following shall be applicable on all door frames: - Frames shall be double rebated suitable for 40mm thick doors</p> <p>One jamb of all frames for single doors shall be factory prepared for striking plate of mortice lock</p> <p>All frames shall be factory fitted with three washered butt hinges for each door</p> <p>All frames shall be treated with one coat factory applied metal primer complying with SANS Specification 909</p> <p>Striking plates for door frames</p> <p>Striking plates to be of chromium-plated type, unless otherwise described</p> <p>Sealing of all abutments</p> <p>All windows, etc. abutting face brick walls, etc. to be sealed watertight with an approved silicon sealant along all joints and prices to allow therefore</p> <p>NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 136 for CPAP formula purposes</p> <p><b>STEEL WELDED SCREENS, GATES, ETC</b></p> <p>Welded mild steel purpose made steel gates</p>				
1	60 x 60 x 3mm hollow square section in frames to gates	No.		3	
2	Extra over 60 x 60mm frame for Corner	No.		3	
3	40 x 40 x 3mm Flat section lug, welded to frame, and once drilled to received 8mm expansion bolt (Bolt elsewhere)	No.		9	
Carried Forward					R

Brought Forward					R
	<p>Purpose made single steel gate 843 x 2170mm high overall, consisting of a 60 x 40 x 3mm hollow section frame, with five 20mm Ø round bar intermediates at 110mm centres, centred in the middle of the frame and welded to frame at 90° angles, with two 6 x 40mm flat section rails located 3533mm measured from the top and from the bottom of frame, welded at 90° angles to frame, complete with three</p> <p>4 80mm long butt hinges welded to frame</p> <p>5 8mm Ø x 80mm long Expansion bolt</p> <p><b>PRESSED STEEL DOOR FRAMES</b></p> <p>1.2mm single rebated galvanised frames, with lugs welded to frame</p> <p>6 Door frame for 813 x 2032mm high door, suitable for 110mm wall</p> <p>7 Door frame for 813 x 2032mm high door, suitable for 230mm wall</p> <p>8 Door frame for 936 x 2032mm high door, suitable for 230mm wall</p> <p><b>STEEL WINDOW FRAMES</b></p> <p>Custom made stainless steel window frames</p> <p>Custom made stainless steel window 900 x 457mm high overall, consisting of a single sash with two equally spaced mullions, with the sash bottom hung and opening in, factory fitted with galvanised 8mm burglar bars, and including</p> <p>9 approved brass fittings (glass elsewhere) (W1)</p> <p>Custom made stainless steel window 600 x 457mm high overall, consisting of a single sash bottom hung and opening in, factory fitted with galvanised 8mm burglar bars, and</p> <p>10 including approved brass fittings (glass elsewhere) (W2)</p>	<p>No.</p> <p>No.</p> <p>No.</p> <p>No.</p> <p>No.</p> <p>No.</p>	<p>3</p> <p>9</p> <p>6</p> <p>0</p> <p>3</p> <p>3</p> <p>4</p>		
Carried Forward					R

Brought Forward					R
11	Custom made stainless steel window 900 x 657mm high overall, consisting of a single sash with two equally spaced mullions, with the sash bottom hung and opening in, factory fitted with galvanised 8mm burglar bars, and including approved brass fittings (glass elsewhere)	No.	26		
	<b>SUNDRY METALWORK</b>				
12	1000mm Galvanised bar bent into U-shape, with each end cast in slab for a length of 400mm	No.	38		
Carried to Summary of Section no. 2					R

<b>SECTION NO. 2</b> <b>BILL NO. 10</b> <b>PLASTERING</b>					
	<p>PREAMBLES</p> <p>For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"</p> <p>SUPPLEMENTARY PREAMBLES</p> <p>Preparatory work</p> <p>Surfaces shall be clean and free from oil and thoroughly wetted directly before any plastering or other in-situ finishes are commenced. Concrete surfaces shall be slushed with a mixture of one part cement and one part coarse sand or otherwise treated to form a proper key. Preparatory coats shall be thoroughly scored and roughened to form a proper key</p> <p>Finish</p> <p>All coats of paving and plastering shall be executed in one operation without any blemishes</p> <p>Granolithic</p> <p>Granolithic shall be cured for at least seven days after laying Coloured granolithic shall be carried out in two coats in one operation and shall be tinted to the required colour with approved colouring pigment mixed into the finishing coat. Under no circumstances is the pigment to be sprinkled on and trowelled in after the granolithic is laid Granolithic shall be divided into panels not exceeding 6m2 with V-joints and deep trowel cuts</p> <p>Granolithic to stairs shall include non-slip reedings to treads</p> <p>Skirtings</p> <p>Skirtings shall not exceed 25mm thick and shall have a fair edge with arris or rounded external angle at top edge or V-joint to finish flush with plaster and coved or square junction with floor finish</p>				

	<p>Plaster</p> <p>All plaster, other than skim plaster, shall not be less than 10mm and not more than 20mm thick</p> <p>General</p> <p>Rates for plastering described as being on walls shall include concrete columns, beams and lintels flush with the face of the wall</p> <p>Textured finishes</p> <p>All textured finishes are to be applied to the satisfaction of the principal agent and executed by an approved firm of specialists, all strictly in accordance with the materials supplied and methods employed by the manufacturer</p> <p>Preparatory work for textured finishes</p> <p>Textured finishes to be applied to surfaces as described. Rates tendered are to include for all necessary priming, preparatory work, etc</p> <p>All surfaces are to be inspected and approved by the principal agent prior any work is commenced</p> <p>NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 142 for CPAP formula purposes.</p> <p><b>INTERNAL PLASTER</b></p> <p>One coat cement plaster 1:5 on brickwork, finished with a wood float</p>				
1	On walls, 13 - 16mm thick	m <sup>2</sup>	240		
2	In narrow widths, 13 - 16mm thick	m <sup>2</sup>	15		
	<b>GRANOLITHIC AND SCREEDS</b>				
3	35 mm thick wood floated	m <sup>2</sup>	70		
4	35 mm thick steel floated	m <sup>2</sup>	160		
Carried to Summary of Section no. 2					R

SECTION NO. 2					
BILL NO. 11					
TILING					
	<b>TILING</b>  <b>BUILDING WORKS</b>  <b>BILL NO. 11</b>  <b>WALL TILING</b>  150 x 150mm white glazed Porcelain tiles with white waterproof grout, laid 2 courses above basins and sink  1 On walls, in splashbacks	m <sup>2</sup>	10		
	<b>FLOOR COVERINGS / TILING</b>  300 x 300mm Vinyl tiles colour to be confirmed by client, laid on the floor.  2 On floors	m <sup>2</sup>	160		
	Timber skirting mounted on the wall with nails or screws  3 On walls	m	90		
	<b>POLISH, SEALERS, ETC</b>  Two coats wax polish  4 On floors	m <sup>2</sup>	160		
Carried to Summary of Section no. 2					R

**SECTION NO. 2**

**BILL NO. 12**

**PLUMBING AND DRAINAGE**

**NOTE :** Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 146 for CPAP formula purposes.

**PREAMBLES**

For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"

**SUPPLEMENTARY PREAMBLES**

Regulations

All drainage and sanitary work shall be executed in accordance with the regulations of the Local Authority. Only registered plumbers and drainlayers shall be employed on any plumbing and drainage work on this contract

Prices

Prices must include for arranging joints at convenient points, embedding in concrete of for rough cutting around brickwork as the work proceeds

No distinction has been made between pipes chased in walls, fixed in ceilings, roofs, floors, columns, slabs, etc or for different finishes to these elements and has been described as "pipes".

Prices shall therefore include for all holderbats, brackets, clips, bands, etc and building in or chasing of same, holes through brickwork, concrete, etc and for making good facings, plaster, granolithic and other in-situ finishes as necessary

Prices to fixing of sanitary fittings etc shall include for setting up and fixing in position as described, joints to soil, waste and supply pipes as the case may be, making good finishes around and for protecting fittings from injury during subsequent building operations



<p>Excavations</p> <p>Prices for all excavations must include for necessary staging and for the risk of collapse of excavation side and also keeping excavations free from water</p> <p>Laying, backfilling, bedding, etc. of pipes</p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions</p> <p>Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SANS 1200 L : Medium-pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200 DB : 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 1200 LB : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding</p> <p>Compacting</p> <p>Filling for all types of pipes described as "under solid floors, etc." shall be done with approved backfilling and compacted to 93% Mod. AASHTO density, unless otherwise described</p> <p>uPVC pipes and fittings:</p> <p>Soil, waste and vent pipes and fittings shall be solvent weld jointed</p> <p>uPVC pressure pipes and fittings:</p> <p>Pipes for water supply shall be of the class stated</p> <p>Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings</p> <p>Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints</p> <p>Copper pipes:</p>				
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground</p> <p>Fixing of pipes</p> <p>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</p> <p>Reducing fittings</p> <p>Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained</p> <p>Exposed concrete surfaces</p> <p>Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster</p> <p>Excavations</p> <p>No claim for rock excavation will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling</p> <p>Soft rock and "hard rock" shall be as defined in "Earthworks"</p> <p>Laying, backfilling, bedding, etc. of pipes</p>				
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions</p> <p>Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium-pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200 DB : 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 1200 LB : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be class B bedding</p> <p>Flush pans</p> <p>Flush pans shall have straight or side outlets and "P" or "S" traps as necessary</p> <p>Stainless steel basins, sinks, wash troughs, urinals, etc.</p> <p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable</p> <p>Waste unions</p> <p>Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings</p> <p><b>RAINWATER DISPOSAL</b></p> <p>PVC gutter</p> <p>100mm Ø "Marley" PVC Gutters or similar approved, in maximum possible lengths, fixed with concealed brackets at max 1m centres, laid to fall 1:200 towards outlet</p> <p>1</p> <p>2 Extra over Gutters for outlet</p> <p>3 Extra over Gutters for stopped ends</p> <p>PVC rain water pipes</p>				
		m	70		
		No.	16		
		No.	24		
Carried Forward					R

Brought Forward					R
	75mm Ø "Marley" PVC Rain water pipe or similar approved, fixed with downpipe clips to walls, to discharge into rain water tank	m	36		
4					
5	Extra over Rain water pipe for bend	No.	12		
6	Extra over Rain water pipe for swanneck ends	No.	12		
<b>SANITARY FITTINGS, TANKS, GEYSERS, ETC</b>					
Sanitary fittings					
	"Atlas Plastics: 200 VIP" pedestal complete with seat and pan, or similar approved, inserted into concrete cover slab of pit	No.	5		
7					
	"Atlas Plastics: 200 VIP" Pedestal inlet tunnel, or similar approved	No.	5		
8					
	"Atlas Plastics: Christy" 570 x 245mm Wash hand basin with galvanised brackets, or similar approved, fixed to wall with four 8mm Ø rawl bolts, or similar approved	No.	4		
9					
	Galvanized kitchen sink with galvanised brackets, or similar approved, fixed to wall with four 8mm Ø rawl bolts, or similar approved	No.	2		
10					
Tanks					
	5000l "JoJo Low Profile" water tank, or similar approved, fitted with flood valve, and all fittings necessary to connect to and supply ablutions with water	No.	3		
11					
Waste unions, traps, etc					
	32mm unslotted Basin / Sink waste with PVC backnut	No.	6		
13					
	32 x 40mm resealable rubber S-trap	No.	6		
14					
Taps, valves, etc					
	15mm "Charlock PVC Pro" bib tap	No.	4		
15					
	15mm "Mixer Chrome" kitchen tap for the sink	No.	2		
16					
<b>WATER SUPPLIES</b>					
Polycop pipes					
	15mm Ø supply pipe, chased in brick wall	m	160		
17					
	Extra over 15mm Ø Polycop pipe for fittings	No.	48		
18					
Carried Forward					R

Brought Forward					R
	<b>SOIL DRAINAGE</b>				
	uPVC pipes				
19	50mm Ø soil pipe	m	74		
	3m x 110mm Ø vent pipe (Colour: black), fitted with 110mm				
20	Ø fly screen, fixed to wall with three 110mm holder bats	m	5		
	Extra over uPVC pipes				
21	Extra over 50mm Ø uPVC pipe for bend	No.	24		
	Inspection chambers, catch pits, etc				
22	600 x 600mm double seal Cast iron cover and frame 76kg	No.	5		
Carried to Summary of Section no. 2					R

<b>SECTION NO. 2</b>					
<b>BILL NO. 13</b>					
<b>GLAZING</b>					
	<b>PREAMBLES</b>				
	For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"				
	Float glass				
	The term "float glass" is used for monolithic annealed glass				
	Laminated glass				
	Laminated glass to have polyvinyl butyral (PVB) interlayer(s)				
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 150 for CPAP formula purposes				
	<b>GLAZING TO STEEL FRAMES</b>				
	4mm Sandblasted float glass in steel frames, fixed with putty				

1	Panes exceeding 0.1m <sup>2</sup> , but n.e. 0.5m <sup>2</sup>  8.38mm Normal strenght clear laminated safety glass in steel frames, fixed with putty	m <sup>2</sup>	10		
2	Panes exceeding 0.1m <sup>2</sup> , but n.e. 0.5m <sup>2</sup>  <b>GLASS TOPS, SHELVES, DOORS, MIRRORS, ETC</b>  6mm Silvered float glass copper backed mirrors with polished edges holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete	m <sup>2</sup>	20		
3	600 x 400 silver backed Mirror fixed with dome head screws	No.	4		
Carried to Summary of Section no. 3					R

<b>SECTION NO. 2</b>  <b>BILL NO. 14</b>  <b>PAINTWORK</b>					
	<b>PREAMBLES</b>  For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"  <b>SUPPLEMENTARY PREAMBLES</b>  Descriptions  Descriptions of painting shall be deemed to include complete preparation of new as well as existing surfaces, including patching and filling, sanding and primer on nail and screw heads Descriptions of painting on pipes, gutters, etc shall be deemed to include painting on holder bats, hangers, clips, clamps, etc Descriptions of painting on windows, frames, etc shall be deemed to include primer in rebates of sashes to be glazed  NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 152 for CPAP formula purposes				

<b>ON FLOATED PLASTER SURFACES</b>					
One coat "Dulux Trade: Alkali Resistant Primer", one coat "Dulux Trade: Universal Undercoat", and two coats "Dulux Pearl glo Water Based"					
1	On internal walls	m <sup>2</sup>	240		
<b>ON WOODEN SURFACES</b>					
Under coat and two coats enamel paint					
2	To doors	m <sup>2</sup>	20		
<b>ON PLASTERBOARD</b>					
One coat alkali resistant plaster primer and two coats PVA acrylic emulsion paint					
3	On ceilings	m <sup>2</sup>	190		
4	On cornices	m <sup>2</sup>	16		
<b>ON METAL SURFACES</b>					
Under coat and two coats high gloss enamel paint					
5	To steel door and window frames	m <sup>2</sup>	136		
6	To steel gates	m <sup>2</sup>	34		
Carried to Summary of Section no. 2					R

BILL NO.	SECTIONAL NO. 2 SUMMARY	PAGE NO.			AMOUNT
1	Foundations	30 - 41			R
2	Concrete, formwork and reinforcement	41 - 45			R
3	Masonry	46 - 50			R
4	Waterproofing	51 - 52			R
5	Roof coverings, claddings, etc	53 - 54			R
6	Carpentry and joinery	54 - 61			R
7	Ceilings, partitions and access flooring	61 - 63			R
8	Ironmongery	63 - 64			R
9	Metalwork	64 - 68			R
10	Plastering	69 - 70			R
11	Tiling	71 - 71			R
12	Plumbing and drainage	72 - 77			R
13	Glazing	77 - 78			R
14	Paintwork	78 - 79			R
Carried to Final Summary					R



**SECTION NO. 3**

**BILL NO. 1: EXTERNAL WORKS**

**GENERAL SITE WORKS, ETC (PROVISIONAL)**

**PREAMBLES**

For preambles see "Specification of materials and methods to be used - PW 371"

**SUPPLEMENTARY PREAMBLES**

Supplementary preambles and full descriptions of materials, items, work, etc. applicable to Section No. 3

The Contractor is referred to the previous Section 2 for supplementary preambles and full descriptions of materials, items, work, etc. which shall be regarded to be equally applicable for work described in this Bill, unless specifically otherwise described

**General**

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

**Site clearance**

All rubble, rubbish, vegetable soil, shrubs, bush, trees, etc. shall be removed from the whole area and carted away off the construction site to a suitable dumping site, which has to be located by the Contractor, all to the full satisfaction of the Principal Agent

**Filling (General)**

It will be, at all times, required from the Contractor to apply and execute strict quality control on all filling material used

<p>Samples of potential fill material obtained from excavations, trench excavations, etc. are to be submitted to and approved by the Principal Agent prior the re-use thereof as "filling"</p> <p>All filling obtained from a commercial source should comply to minimum G6 standard</p> <p>Should any material be found unsuitable and the use thereof be disapproved, such material shall be disposed and approved material must be sourced and imported from an approved commercial source</p> <p>Filling in general shall be compacted to the prescribed percentage Mod AASHTO density</p> <p>CBR and indicator tests</p> <p>Density tests for monitoring filling shall be done at the minimum prescribed frequencies per each 150mm thick layer of filling placed</p> <p>The Contractor is to note that all necessary tests (i.e. CBR and indicator tests, etc.) are to be conducted for all filling material, whether obtained from the excavations or to be imported from an approved commercial source</p> <p>Results of these tests are to be submitted to and approved by the Principal Agent prior commencement of any placement thereof and/or filling done therewith</p> <p>Density tests</p> <p>It will be required from the Contractor to execute density tests for monitoring filling at the following minimum frequencies per each filling layer placed:</p> <p>Filling to form building platforms, etc: 1 Test per 200m<sup>2</sup> plan area per each 150mm thick layer</p> <p>Results of density tests executed are to be submitted to and approval obtained from the Principal Agent prior commencement of any subsequent fill layers and/or other work</p> <p>Keeping excavations free from water:</p>				
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>No separate provision has been made in this Bill for measurement and payment for bailing, pumping or otherwise keeping excavations free from water during the construction process of the work measured in this Bill</p> <p>Therefore, tenderers are to note that their tendered rates are to cater for the above-mentioned as no claims arising out of their failure to do so will afterwards be entertained</p> <p>Carting away of excessive and/or unsuitable excavated material</p> <p>Descriptions for "carting away excessive or unsuitable excavated material from site" shall, unless specifically otherwise described, be deemed to include the loading and hauling of excessive or unsuitable excavated material to a suitable dumping site, which has to be located by the Contractor, off the construction site</p> <p>The location of the intended dumping site will be subjected to the prior written approval of the Principal Agent</p> <p>The Contractor shall also be liable to, upon completion, to rehabilitate all areas of the site which was disturbed during the construction phase due to construction activities, temporarily dumping/spoiling of excavated material, etc. It will be required from the Contractor to grade such areas to follow the adjacent ground contours and afterwards compacted to 80% Mod AASHTO density, all to the full satisfaction of the Principal Agent</p> <p>Tendered rates must make provision for the above-mentioned as no additional claims in this regard will afterwards be entertained</p> <p>Relevant SANS 1200 Specifications</p> <p>The following relevant SANS 1200 Specifications shall be regarded applicable:</p> <p>Earth mattresses, building platforms, etc: SANS 1200 AA General (Small Works) SANS 1200 C Site clearance SANS 1200 DE SANS 1200 ME Sub-base SANS 1200 MF Base</p>				
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>All work related to the above-mentioned elements shall be done with materials specified and in according to methods prescribed by the relevant SANS 1200 referred to</p> <p>SANS 1200 Specification (General)</p> <p>The SANS 1200 Specifications as referred to above were drawn up to cover activities normally encountered on civil engineering work, which is equally applicable on work scheduled hereunder for this project</p> <p>All the specifications referred to above, although not issued with these Bills of Quantities, shall be deemed to form part of this document and shall be considered as applying to the performance of work to be completed in terms of this Section</p> <p>The Contractor shall obtain a copies of the said specifications from the South African Bureau of Standards and be kept on site at all times</p> <p>Measurement and payment</p> <p>Measurement and payment clauses as described in the above-mentioned SANS 1200 Specifications shall not apply to the work as set out in this Bill</p> <p><b>EARTHWORKS</b></p> <p><b>GENERAL SITE CLEARANCE ETC</b></p> <p>Site clearance</p> <p>Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc</p> <p>1</p> <p>Stripping average 150mm thick layer of top soil and stockpiling on site</p> <p>2</p> <p><b>BULK EXCAVATION, FILLING, ETC</b></p> <p>Open face excavation over sloping site</p> <p>Open face excavation to form platforms and embankments and stockpiling on site</p> <p>3</p>				
		m2	580		
		m2	580		
		m3	290		
Carried Forward					R

Brought Forward					R
	Extra over bulk excavation in earth for excavation in				
4	Soft rock	m3	25		
5	Hard rock	m3	10		
	Risk of collapse of excavations				
	Keeping excavations free of all water other than				
6	subterranean water	Item	1		
	Extra over all excavations for carting away				
	Extra over all excavations for carting away surplus material from excavations and/or stockpile on site to a dumping site				
7	to be located by the contractor	m <sup>3</sup>	280		
	<b>FILLING</b>				
	Earth filling obtained from the excavations including haulage approximately 800m from perimeter of excavations (not compacted)				
8	In prescribed stock piles on site	m3	80		
	Earth filling (G7 material) obtained and supplied by the contractor from commercial sources or borrow pits including haulage of 10km from perimeter of site , and compacted to 93% Modified AASHTO density				
9	Sub-base to from platforms and embankments	m3	290		
	<b>WEED KILLERS, INSECTICIDES, ETC</b>				
	Weedkiller in accordance with SABS 1165				
10	Under floors	m <sup>2</sup>	8		
11	To bottoms and sides of trenches	m <sup>2</sup>	20		
	<b>STORMWATER DRAINAGE</b>				
	(HAYLETT FORMULA WORK GROUP No. 146)				
	Mass concrete with a coarse aggregate of 19mm and a minimum compressive strength of 20MPa at 28 days				
Carried Forward					R

Brought Forward					R
12	V-shaped channel size 600mm wide x 300mm thick with rounded salient edges and finished on exposed surfaces with 2:1 cement mortar, laid to falls in panels not exceeding 2m long with 12mm polystyrene movement joints with exposed edges raked out for a depth of 25mm and filled with bituminous compound including all necessary excavation and formwork	m	95		
13	Extra over for fair stopped end	No	2		
14	Extra over for T-intersection	No	2		
<b>SOIL DRAINAGE</b>					
	uPVC Class 6 pipes as drain pipes with couplings				
15	110mm Pipes	m	15		
<b>WATER SUPPLY</b>					
	Excavation in earth not exceeding 2m deep				
16	Trenches	m3	2		
	Extra over all excavations for carting away				
17	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor	m3	2		
18	Sides of trench and hole excavations not exceeding 1,5m deep	m2	10		
	G7 filling obtained from excavations compacted to 95% Mod AASHTO density				
19	Under floors, steps, pavings, etc	m3	3		
	Water storage tanks shall carry a minimum 8 year manufacturer guarantee, which certificate shall be handed over to the Client upon practical completion				
Carried Forward					R

Brought Forward					R
20	<p>PVC Rainwater harvesting 5000 litre water tank, complete with vermin proof lid, inlets, outlets, etc. and anchored down with and including 4mm diameter galvanised mild steel wire loop double and fixed to top of tank with 15mm diameter rubber hose as sleeve, and anchored to top of concrete plinth with and including 4No. Y10 high tensile steel reinforcement rods cast into concrete plinth</p> <p><b>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</b></p> <p>25MPa/19mm Unreinforced concrete cast against excavated surfaces</p>	No	1		
21	<p>Strip footings</p> <p><b>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</b></p> <p>25MPa/19mm concrete</p>	m3	1		
22	<p>Surface beds on waterproofing</p> <p><b>TEST BLOCKS</b></p> <p>Making and testing 150 x 150 x 150mm concrete strenght test cube (Provisional)</p> <p>Fabric Reinforcement</p> <p>Making and testing 150 x 150 x 150mm concrete strenght test cube (Provisional)</p> <p><b>CONCRETE SUNDRIES</b></p> <p>Finishing top surfaces of concrete smooth with a wood float</p>	m3	2		
23		No	5		
24		No	8		
25	<p>Aprons, slabs, etc to falls</p> <p><b>WATERPROOFING</b></p> <p><b>DAMP-PROOFING OF WALLS AND FLOORS</b></p> <p>One layer of 250 micron "Consol Plastics Gunplas USB Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</p>	m2	8		
Carried Forward					R

Brought Forward					R
26	Under surface beds  (CPAP formula work group no. 116)  Brickwork of NFP bricks in class II mortar	m2	8		
27	One brick walls  2.5mm Brickwork reinforcement	m2	10		
28	150mm Wide reinforcement built in horizontally  COROBRICK firelight satin face bricks pointed with recessed horizontal and vertical joints	m	880		
29	Extra over brickwork for face brickwork  Brick-on-edge header course copings, sills, etc of "COROBRICK" firelight satin face bricks, pointed with recessed joints on all exposed faces	m2	7		
30	Coping on top of one brick wall	m	12		
31	Disinfecting water pipe and tank system  HDPE polyethelene Class 12 piping with 'Plasson' or other approved fittings	Item	1		
32	32mm pipe and excavations not exceeding 1m deep	m	20		
	<b>SUNDRIES</b>				
33	50mm Diameter irrigation connection point including manhole box and cover  Water storage tanks shall carry a minimum 8 year manufacturer guarantee, which certificate shall be handed over to the Client upon practical completion	No	2		
34	PVC Rainwater harvesting 5000 litre water tank, complete with vermin proof lid, inlets, outlets, etc. and anchored down with and including 4mm diameter galvanised mild steel wire loop double and fixed to top of tank with 15mm diameter rubber hose as sleeve, and anchored to top of concrete plinth with and including 4No. Y10 high tensile steel reinforcement rods cast into concrete plinth	No	1		
Carried Forward					R



Brought Forward					R
	<b>TESTING</b>				
35	Provide all necessary apparatus, water, etc. for and test the whole of Soil Drainage and Water supply systems to the satisfaction of the Principal Agent and Local Authority, rectify all defective work free of charge and leave in perfect order	Item	1		
	<b>PERIMETER FENCING</b>				
	<b>Clearing fence line</b>				
36	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc.	m2	192		
	High Security metal fencing Galvanised security fence with bitumen dipped steel standards and bitumen-aluminium painted (two coats) steel pipe posts, stays, gates, etc including galvanised steel bolts, straining eye bolts, etc, site clearance and preparation of ground				
	Barbed wire fencing, gates, etc including two coats aluminium paint on metal stays, framing, etc				
37	Fencing formed of I section standards 1500mm long at maximum 60m centres driven into ground and with droppers 1500mm long at maximum 30m centres and 0.6mm strands of galvanised barbed wire tied to standards, posts and eye bolts	m	212		
38	Gate 1000 x 1500mm high filled in with galvanised barbed wire	No	1		
39	Double vehicular gate and frame 6 000 x 1 500mm high overall, the outer frame of 45 x 45 x 3mm hollow section bolted to wall with and including eight 70mm M80 expansion bolts and the gate 900 x 1 500mm high of 40 x 60 x 2mm hollow section frame with two 40 x 6mm flat section horizontal rails filled in with 20mm diameter vertical rails at 110mm centres fitted with one and a half pairs of suitable pin hinges welded to hollow section steel frame, complete with and including 150mm barrel bolt and padlock	No	1		
Carried Forward					R

Brought Forward					R
	<b>PLAY GROUND, JUNGLE GYM</b>				
40	Allow the Provisional Amount of R80 000.00 (Eighty Thousand Rands only) for the complete installations of Jungle gym as per the attached DoE specifications. Play ground equipment and sandpit area	item	1	R 80,000.00	
41	Profit and attendance	item			
Carried to Summary of Section no. 3					R

<b>SECTION NO. 3</b>					
<b>BILL NO. 2: EXTERNAL WALKWAYS</b>					
<b>GENERAL SITE WORKS, ETC (PROVISIONAL)</b>					
	<b>EARTHWORKS</b>  PREAMBLES For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"  SUPPLEMENTARY PREAMBLES Classification of excavated material  "Hard rock" shall mean granite, quartzitic sandstone or other rock of similar hardness, the removal of which requires drilling, wedging and splitting or the use of explosives  "Soft rock" shall mean hard material, the removal of which warrants the use of pneumatic tools and includes hard shale, ferricite, compact ouklip and material of similar hardness  "Earth" shall mean all ground other than that classified as "hard rock" or "soft rock" and shall include made-up ground and any loose stones or pieces of concrete not exceeding 0,03m <sup>3</sup> in volume				

	<b>SITE CLEARANCE</b>				
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m2	34		
	<b>EXCAVATION, FILLING, ETC</b>				
	Excavation in earth not exceeding 2m deep				
2	Reduced levels under floors	m3	8		
3	Trenches	m3	23		
	Extra over bulk excavation in earth for excavation in				
4	Soft rock	m3	4		
5	Hard rock	m3	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	6		
	Risk of collapse of excavations				
7	Sides of trench and hole excavations not exceeding 1,5m deep	m2	61		
	Keep excavations free from water	item	1		
	<b>FILLING ETC</b>				
	G7 filling obtained from excavations compacted to 95% Mod AASHTO density				
9	Backfilling to trenches, holes, etc	m3	3		
	<b>SOIL POISONING</b>				
	Soil insecticide				
10	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	40		
11	To bottoms and sides of trenches	m2	326		
Carried Forward					R

Brought Forward					R
	<b>TESTS</b>  Prescribed tests to determine degree of compaction or other properties of ground or filling				
12	Modified AASHTO Density test	No	5		
	<b>CONCRETE</b>  <b>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</b>				
13	Strip footings	m3	11		
	<b>REINFORCED CONCRETE</b> 25MPa/20mm concrete				
14	100mm Surface beds on waterproofing	m3	8		
	Fabric reinforcement				
15	Type 193 fabric reinforcement in concrete surface beds, slabs, etc	m2	42		
	<b>DAMPPROOFING OF FOUNDATIONS, WALLS AND FLOORS</b>  One layer of 250 micron "Consol Plastics Gunplas USB Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"				
16	Under surface beds	m2	326		
	Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar				
17	One brick walls	m2	20		
	2.5mm Brickwork reinforcement				
18	150mm Wide reinforcement built in horizontally	m	50		
	COROBICK Rainbow Light face bricks pointed with recessed horizontal and vertical joints				
Carried Forward					R

Brought Forward					R
19	Extra over brickwork for face brickwork	m2	7		
	Brick-on-edge header course copings, sills, etc of "COROBRICK" Rainbow Light face bricks, pointed with recessed joints on all exposed faces				
20	Brick-on-edge header course lintel pointed on face and 230mm soffit	m	22		
	<b>METALWORK</b>				
	Welded frames to concrete walkways				
21	75 x 75 x 3mm Hollow section U shaped frame mitred and welded 5 500mm girth with base plates 150 x 150 x 3mm thick on both ends with 10mm holes for bolts (elsewhere measured)	No	18		
22	25 x 25 x 3mm Angle purlin bolted to frame	m	30		
23	8mm Expansion bolt and nuts	No	16		
24	10mm Expansion anchor with loose bolt	No	16		
	<b>PROFILED METAL SHEETING AND ACCESSORIES</b>				
	0,5mm Gavanized IBR profile steel sheeting or similar approved complete				
25	Roof covering with pitch not exceeding 5 degrees	m2	28		
	<b>ON METAL</b>				
	Spot priming defects in pre primed surfaces with zinc chromate primer and applying one undercoat and two coat high gloss enamel paint on steel				
26	On rails, bars, pipes, etc not exceeding 300 mm girth	m	46		
Carried to Summary of Section no. 3					R

BILL NO.	SECTION NO. 3 SUMMARY	PAGE NO.			AMOUNT
1	External Works	91 - 90			R
2	External Walkways	90 - 93			R
Carried to Final Summary					R

SECTION NO. 4					
BILL NO. 1: BULK SUPPLY AND RETICULATION					
ELECTRICAL INSTALLATIONS					
NOTE:	The complete installation must comply SANS 0142 specifications and the Quality specification in this document. Therefore Tenders are advised to study the specification and drawings before the Bill is to be price.				
	<b>BULK SUPPLY &amp; RETICULATION</b>				
	<b>CABLES, CONDUCTORS &amp; SLEEVES</b>				
	Supply and install PVC insulated amoured copper cables				
	1 6mm <sup>2</sup> 3 x core PVC insulated copper cable	m	150		
	2 4mm <sup>2</sup> 3 core PVC insulated copper cable	m	50		
	<b>Glands, Shrouds &amp; Cable Terminations</b>				
	3 6mm <sup>2</sup> 3 x core PVC insulated copper cable	No.	4		
	4 4mm <sup>2</sup> 3 core PVC insulated copper cable	No.	2		
	<b>Cable Markers &amp; Warning Tapes</b>				
	5 Cable markers for cable routes indication	No.	4		
	6 Cable warning tape	m	150		
	<b>Supply &amp; Install PVC Sleeves</b>				
	7 50 diameter	m	100		
	8 32 diameter	m	100		
	<b>Trenching and Excavations (300mm wide &amp; 600mm deep)</b>				
	9 Pickable soil	m <sup>3</sup>	150		
	10 Bedding	m <sup>3</sup>	100		
	11 Backfilling	m <sup>3</sup>	150		
	12 Install 600 x 600 x 600mm manhole	No.	2		
	<b>Distribution Boards or Kiosks</b>				
	13 Main Kiosk	No.	1		
Carried to Summary of Section no. 4					R

**SECTION NO. 4**

**BILL NO. 2: GRADE R CLASSROOM BUILDING**

**ELECTRICAL INSTALLATIONS (PROVISIONAL)**

<b>NOTE:</b>	<p><b>The complete installation must comply SANS 0142 specifications and the Quality specification in this document. Therefore Tenders are advised to study the specification and drawings before the Bill is to be price.</b></p> <p><b>Conduits, Wall boxes &amp; Draw wires</b></p> <p>Supply and install conduits including short lengths jointing, sweeping bends, buses, locknuts, roundboxes, etc.</p>				
	1	20mm diameter galvanised steel conduit	m	250	
	2	25mm diameter galvanised steel conduit	m	125	
	3	20mm copex conduit	m	25	
	Supply and install steel galvanised wall boxes				
	4	100 x 50 x 50mm deep	No.	3	
	5	100 x 100 x 50mm deep	No.	11	
	6	100 x 100mm blank cover plates	No.	2	
	7	100 x 50mm blank cover plates	No.	0	
	8	4 way galvanised steel round boxes	No.	28	
	Supply and install steel galvanised draw wires drawn into conduits or sleeves				
	9	1,6mm diameter	m	10	
<b>Electrical Cable Management &amp; Trunking</b>					
Supply and install galvanised 'Unistrut' suspended from roof structures, and fixing not to exceed 4 meters including galvanised steel covers. (Including elbows, corners sections, T-sections & end caps)					
	10	P 9000	m	20	
<b>Carried Forward</b>					<b>R</b>



Brought Forward					R
11	P 2000	m	20		
12	Power Skirting - Cabstrut N8/P803, 3 Way with 2 cover plates and divider.	m	20		
	<b>Distribution Boards</b>				
	Supply and install distribution board as per the Single line drawings, including wirings and switchgears.				
13	DB - Main	No.	1		
	<b>Conductors</b>				
	Supply and install 600/1000 PVC insulated stranded copper conductors drawn into conduits				
14	2.5mm <sup>2</sup>	m	300		
15	4mm <sup>2</sup>	m	450		
	Supply and install bare copper earth wire (BCEW) drawn into conduits				
16	2.5mm <sup>2</sup>	m	225		
	<b>Switch Socket Outlets</b>				
	Supply, install and connect switch sockets in flush mounted wall boxes, complete with covers				
17	16 Amp Single Socket Normal	No.	8		
18	16 Amp Single Dedicated Sockets (Red)	No.	Rate only		
19	16 Amp Double Socket Normal	No.	8		
	Supply, install and connect switch sockets on Power skirting, complete with covers				
20	16 Amp Single Socket Normal	No.	4		
21	16 Amp Single Dedicated Socket (Red)	No.	4		
	Supply, install and connect switch sockets on on 60mm steel round boxes (for light fittings), complete with covers				
Carried Forward					R

Brought Forward					R
22	5 Amp Single Unswitched Socket	No.	12		
	Supply, install and connect Cluster Unit, complete with covers				
23	Cluster Unit with 1x16A 3-pin Normal SSO, 1x16A 3-pin Dedicated SSO, 1xRJ11 and 1xRJ45)	No.	0		
	<b>Switches</b>				
	Supply, install and connect light switches in flush mounted wall boxes, complete with covers				
24	16 Amp Single Lever, 1-way	No.	2		
25	16 Amp Motion Sensors	No.	0		
26	Day light switch / Photocell	No.	1		
	<b>Isolators</b>				
	Supply, install and connect light Isolators in flush mounted wall boxes, complete with covers				
27	30 Amp Single phase	No.	0		
	<b>Luminaires</b>				
	Supply, install and connect luminaires complete with lamps, fixing, brass screws, washers, etc.				
28	Type A	No.	12		
29	Type BH	No.	8		
30	Type C	No.	2		
	<b>Earthing and Bonding</b>				
	Earthing of all buildings to comply with the latest SANS 10142, <i>Code of Practice for The wiring of Premises</i> as amended. Bonding of all hot, cold and waste pipes complete with 12,5mm x 1mm thick solid or perforated copper tape including fixing, brass screws, nuts, washers etc. also include				
31	for the earth mat with earth spikes.	item	1		
32	Test and Issue Certificate	No.	1		
Carried Forward					R

Brought Forward					R
	<b>Lightning Protection</b>  Supply, install and test a complete class 2 lightning protection installation, including alu and cu conductors, test joints, steel conduits, earth electrodes, etc.				
33	Down conductors	m	20		
34	Joints for electrical continuity and earth electrodes	No.	6		
35	Earth Electrodes	No.	2		
36	Test and Issue Certificate	No.	1		
Carried to Summary of Section no. 4					R

**SECTION NO. 4**

**BILL NO. 3: GRADE R ABLUTIONS**

**ELECTRICAL INSTALLATIONS (PROVISIONAL)**

<b>NOTE:</b>	<p><b>The complete installation must comply SANS 0142 specifications and the Quality specification in this document. Therefore Tenders are advised to study the specification and drawings before the Bill is to be price.</b></p> <p><b>Conduits, Wall boxes &amp; Draw wires</b></p> <p>Supply and install conduits including short lenghts jointing, sweeping bends, buses, locknuts, roundboxes, etc.</p>				
	1	20mm diameter galvanised steel conduit	m	25	
	2	25mm diameter galvanised steel conduit	m	0	
	3	20mm copex conduit	m	5	
		Supply and install steel galvanised wall boxes			
	4	100 x 50 x 50mm deep	No.	2	
	5	100 x 100 x 50mm deep	No.	2	
	6	100 x 100mm blank cover plates	No.	2	
	7	100 x 50mm blank cover plates	No.	2	
	8	4 way galvanised steel round boxes	No.	12	
		Supply and install steel galvanised draw wires drawn into conduits or sleeves			
	9	1,6mm diameter	m	0	
		<b>Electrical Cable Management &amp; Trunking</b>			
		Supply and install galvanised 'Unistrut' suspended from roof structures, and fixing not to exceed 4 meters including galvanised steel covers. (Including elbows, corners sections, T-sections & end caps)			
	10	P 9000	m	0	
Carried Forward					R

Brought forward					R
11	P 2000	m	0		
12	Power Skirting - Cabstrut N8/P803, 3 Way with 2 cover plates and divider.	m	0		
	<b>Distribution Boards</b>				
	Supply and install distribution board as per the Single line drawings, including wirings and switchgears.				
13	DB - Main	No.	1		
	<b>Conductors</b>				
	Supply and install 600/1000 PVC insulated stranded copper conductors drawn into conduits				
14	2.5mm <sup>2</sup>	m	105		
15	4mm <sup>2</sup>	m	0		
	Supply and install bare copper earth wire (BCEW) drawn into conduits				
16	2.5mm <sup>2</sup>	m	55		
	<b>Switch Socket Outlets</b>				
	Supply, install and connect switch sockets in flush mounted wall boxes, complete with covers				
17	16 Amp Single Socket Normal	No.	0		
18	16 Amp Single Dedicated Sockets (Red)	No.	Rate only		
19	16 Amp Double Socket Normal	No.	0		
	Supply, install and connect switch sockets on Power skirting, complete with covers				
20	16 Amp Single Socket Normal	No.	0		
21	16 Amp Single Dedicated Socket (Red)	No.	0		
	Supply, install and connect switch sockets on on 60mm steel round boxes (for light fittings), complete with covers				
Carried Forward					R

Brought forward					R
22	5 Amp Single Unswitched Socket	No.	10		
	Supply, install and connect Cluster Unit, complete with covers				
	Cluster Unit with 1x16A 3-pin Normal SSO, 1x16A 3-pin				
23	Dedicated SSO, 1xRJ11 and 1xRJ45)	No.	0		
	<b>Switches</b>				
	Supply, install and connect light switches in flush mounted wall boxes, complete with covers				
24	16 Amp Single Lever, 1-way	No.	0		
25	16 Amp Motion Sensors	No.	2		
26	Day light switch / Photocell	No.	1		
	<b>Isolators</b>				
	Supply, install and connect light Isolators in flush mounted wall boxes, complete with covers				
27	30 Amp Single phase	No.	0		
	<b>Luminaires</b>				
	Supply, install and connect luminaires complete with lamps, fixing, brass screws, washers, etc.				
28	Type A	No.	0		
29	Type BH	No.	13		
30	Type C	No.	0		
	<b>Earthing and Bonding</b>				
	Earthing of all buildings to comply with the latest SANS 10142, <i>Code of Practice for The wiring of Premises</i> as amended. Bonding of all hot, cold and waste pipes complete with 12,5mm x 1mm thick solid or perforated copper tape including fixing, brass screws, nuts, washers etc. also include				
31	for the earth mat with earth spikes.	item	1		
32	Test and Issue Certificate	No.	1		
Carried Forward					R

Brought forward					R
	<b>Lightning Protection</b>  Supply, install and test a complete class 2 lightning protection installation, including alu and cu conductors, test joints, steel conduits, earth electrodes, etc.				
33	Down conductors	m	20		
34	Joints for electrical continuity and earth electrodes	No.	6		
35	Earth Electrodes	No.	2		
36	Test and Issue Certificate	No.	1		
Carried to Summary of Section no. 4					R

**SECTION NO. 4**

**BILL NO. 4: PROVISION AMOUNT**

**ELECTRICAL INSTALLATIONS**

<b>NOTE:</b>	<p>The complete installation must comply SANS 0142 specifications and the Quality specification in this document. Therefore Tenders are advised to study the specification and drawings before the Bill is to be price.</p> <p><b>Provision for Upgrade of Incoming Power</b></p> <p>Allow an amount of Fifty Thousand Rands Only (R50 000.00),</p>				
	1 for upgrading of incoming power	item		1 R 50,000.00	
	2 Profit and Attendance	item			
<b>Carried to Summary of Section no. 4</b>					<b>R</b>



BILL NO.	SECTION NO. 4 SUMMARY	PAGE NO.			AMOUNT
1	Bill No. 1 - Bulk Supply & Reticulation	95 - 95			R
2	Bill No. 2 - Grade R Classroom Building	96 - 99			R
3	Bill No. 3 - Grade R Ablution Building	100 - 103			R
4	Bill No. 4 - Provision Amount	104 - 104			R
Carried to Final Summary					R

**SECTION NO. 5**

**BILL NO.1**

**PROVISIONAL SUMS**

	<p>General</p> <p>Work for which budgetary allowances are provided will be measured and valued in accordance with the relevant JBCC building agreement Edition 6.1 March 2014 Principal building contract and deducted in whole or in part if not required without any compensation for loss of profit on the said allowances</p> <p>Prime cost amounts and provisional sums are net. Prime cost amounts shall include for delivery to site of all articles concerned Provisional sums are for material and equipment supplied and installed complete by firms of specialists</p> <p>Profit</p> <p>Where stated, the contractor may allow for profit if required</p> <p>General attendance on nominated/selected subcontractors</p> <p>The item "attendance" which follows each provisional sum for nominated/selected subcontractors' work, shall be deemed to cover all the contractor's costs incurred in providing free of charge to the nominated/selected subcontractors the contractor's duties as described in clause 12.2 of the JBCC N/S Subcontract Agreement</p> <p>Special attendance on nominated/selected subcontractors</p> <p>Where "special attendance" such as unloading, storing, placing in position, providing special power supplies, specific hoisting, crane and scaffolding requirements, provision of temporary casing and/or other specific protection of the works, special security and clearing away rubbish is required, a separate item describing the specific requirements in detail is to be provided for the pricing of such requirements</p>				
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<p>Builder's work</p> <p>Builder's work in connection with specialist services is given elsewhere in these bills of quantities</p> <p>NOMINATED SUB-CONTRACTS The following Provisional Amounts are for work to be executed by the Representative/Agent under a Nominated Sub-Contract          CASH DISCOUNT No cash discount. All provisional sums are "NET". ATTENDANCE Without in any way limiting the meaning and interpretation, "general attendance" on sub-contractors shall include free of charge to the sub-contractor the following services for the purpose of the relative sub-contract works: 1) access to the site and to the places where the work is to be carried out, including the use of any temporary personnel hoists erected by the Contractor for his own use; 2) the provision of water and lighting and single and/or three phase electric power to a position within 50mm metres of the place where work is to be carried out, but excluding water, fuel and power for commissioning of the installation for which the Contractor shall be responsible; 3) the provision of an area for office accommodation, tempory workshops and for the storage of plant and materials; 4) the use of erected scaffolding belonging to the Contractor, in common with others having the like right whilst it so remains erected upon the site; 5) the use of classrooms, latrine, health and welfare facilities, and the like, where provided; 6) the use of the site telephone (if provided) subject to the payment by the sub-contractor for all his outgoing calls; 7) tempory casing and/or other protection of the work; 8) site security measures; 9) hoisting of the sub-contractor's material in loads not exceeding 500 kg; 10) making good in all trades and final cleaning down on completion.</p>				
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

	<b>COMMUNITY LIAISON OFFICER</b>				
	Provide the amount of R 80 000.00 (Eighty Thousand Rands) nett for Community Liason Officer's Salary to be omitted in part or whole as instructed by Principal Agent (R10 000 per month)	Months	8	R 80,000.00	
	Add for Profit on above item	%IT			
	Add for Attendance on above item	%IT			
	<b>DRINKING FOUNTAINS</b>				
	Allow the amount of R 20 000.00( Twenty Thousand rand) for installations of Five drinking fountains	Item	1	R 20,000.00	
	Add for Profit on above item	%IT			
	Add for Attendance on above item	%IT			
Carried to Summary of Section no. 5					R

BILL NO.		SECTION NO. 5 SUMMARY	PAGE NO.		AMOUNT	
1		Community Liaison Officer	108 - 108			R
2		Drinking Fountains	108 - 108			R
Section no. 5 Subtotal						R

FINAL SUMMARY		PAGE NO.			
1	Section No.1 - Preliminaries	29			R
2	Section No.2 - Buildings	61			R
3	Section No.3 - General Site Works	69			R
4	Section No.4 - Electrical Installations	105			R
5	Section No.5 - Provisional Sums	109			R
<b>Subtotal</b>					<b>R</b>
	CONTINGENCIES				
	Allow 10% Contingency Amount for the unforeseen and the sum provided is under the sole control of the client and upon approval by the Client Representative and deducted in whole or in part.	%IT	10%		R
<b>Sub Total</b>					<b>R</b>
	VAT at rate of 15%	%IT	15%		R
<b>TOTAL CARRIED TO FORM OF TENDER</b>					<b>R</b>