

Bills of Quantities
for



education

Department:
Education
PROVINCE OF KWAZULU-NATAL

Early Childhood Development Centre
for
Lwandulwazi Primary School

MODEL BILLS OF QUANTITIES

WITH ABBREVIATED DESCRIPTIONS

(for use in conjunction with the Standard System of Measuring Building Work - seventh edition)

Warning!

These Model Bills of Quantities utilise abbreviated descriptions. The Model Preambles for Trades 2008 published by the Association of South African Quantity Surveyors is designed to support and extend the abbreviated bills of quantities by inter alia referring to SANS construction standards. **Where such model preambles are not applicable** (eg where BS or Euro construction standards are applicable or the design consultants provide other preambles/specifications for insertion), users are to ensure that the abbreviated descriptions when read in conjunction with the Standard System of Measuring Building Work (seventh edition), represent the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.

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Section No.1 - Preliminaries
Bill No. 1
Preliminaries

[illegible]

DEFINITIONS

1 A1.0 DEFINITIONS AND INTERPRETATION

Clause 1.0

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

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

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

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

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

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

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

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

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

"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

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

"INTEREST" means the interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be 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)

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

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

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

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

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

Clause 1.6.4 is amended by replacing it with the following:

No clause

Fixed: _____ Value related: _____ Time related: _____

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<u>OBJECTIVE AND PREPARATION</u>				
2	A2.0 OFFER, ACCEPTANCE AND PERFORMANCE Clause 2.0 Fixed: _____ Value related: _____ Time related: _____	Item		
3	A3.0 DOCUMENTS Clause 3.0 Clause 3.2.1 is amended by replacing "14.1" with "14.0" Clause 3.7 is amended by the addition of the following: The contractor shall supply and keep a copy of the JBCC Series 2000 Principal Building Agreement and Preliminaries applicable to this contract on the site , to which the employer, principal agent and agents shall have access at all times Clause 3.10 is amended by replacing the second reference to " principal agent " with the word " employer " Fixed: _____ Value related: _____ Time related: _____	Item		
4	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: _____	Item		
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5 **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: _____

Item

6 **A6.0 SITE REPRESENTATIVE**

Clause 6.0

Fixed: _____ Value related: _____ Time related: _____

Item

7 **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: _____

Item

8 **A8.0 WORKS RISK**

Clause 8.0

Fixed: _____ Value related: _____ Time related: _____

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9 **A9.0 INDEMNITIES**

Clause 9.0

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10	<p>A10.0 WORKS INSURANCES</p> <p>Clause 10.0</p> <p>Clause 10.0 is amended by the addition of the following clauses:</p> <p>10.5 Damage to the Works</p> <p>(a) Without in any way limiting the contractor's obligations in terms of the contract, the contractor shall bear the full risk of damage to and/or destruction of the works by whatever cause during construction of the works and hereby indemnifies and holds harmless the employer against any such damage. The contractor shall take such precautions and security measures and other steps for the protection and security of the works as the contractor may deem necessary</p> <p>(b) The contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works</p> <p>(c) The employer shall carry the risk of damage to or destruction of the works and materials paid for by the employer that is the result of the excepted risks as set out in 10.6</p> <p>(d) Where the employer bears the risk in terms of this contract, the contractor shall, if requested to do so, reinstate any damage or destroyed portions of the works and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof</p>				
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10.6 Injury to Persons or loss of or damage to Properties

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

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

10.7 High risk insurance

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

10.7.1 Damage to the works

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

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

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10.7.2 Injury to persons or loss of or damage to property

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

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

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

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

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11 **A11.0 LIABILITY INSURANCES**

Clause 11.0

Fixed: _____ Value related: _____ Time
related: _____

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12 **A12.0 EFFECTING INSURANCES**

Clause 12.0

Fixed: _____ Value related: _____ Time
related: _____

Item

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**

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14.2 In respect of contracts with a **contract sum** above R1 million, the **contractor** shall have the right to select the **security** to be provided in terms of 14.3, 14.4, 14.5, 14.6, or 14.7 as stated in the **schedule**. Such **security** shall be provided to the **employer** within twenty-one (21) **calendar days** from **commencement date**. Should the **contractor** fail to select the **security** to be provided or should the **contractor** fail to provide the **employer** with the selected **security** within twenty-one (21) **calendar days** from **commencement date**, the **security** in terms of 14.7 shall be deemed to have been selected

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Fixed: _____ Value related: _____ Time related: _____

EXECUTION

15 **A15.0 PREPARATION FOR AND EXECUTION OF THE WORKS**

Clause 15.0

Clause 15.1.1 is amended by replacing it with:

No clause

Clause 15.1.2 is amended by replacing it with:

The **security** selected in terms of 14.0

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

15.1.4 An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), within 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

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16 **A16.0 ACCESS TO THE WORKS**

Clause 16.0

Fixed: _____ Value related: _____ Time
related: _____

Item

17 **A17.0 CONTRACT INSTRUCTIONS**

Clause 17.0

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

Fixed: _____ Value related: _____ Time
related: _____

Item

18 **A18.0 SETTING OUT OF THE WORKS**

Clause 18.0

Fixed: _____ Value related: _____ Time
related: _____

Item

19 **A19.0 ASSIGNMENT**

Clause 19.0

Fixed: _____ Value related: _____ Time
related: _____

Item

20 **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

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related: _____

Item

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21 **A21.0 SELECTED SUBCONTRACTORS**

Clause 21.0

Clause 21 is amended by replacing it with:

No clause

Fixed: _____ Value related: _____ Time
related: _____

Item

22 **A22.0 EMPLOYER'S DIRECT CONTRACTORS**

Clause 22.0

Fixed: _____ Value related: _____ Time
related: _____

Item

23 **A23.0 CONTRACTOR'S DOMESTIC
SUBCONTRACTORS**

Clause 23.0

Fixed: _____ Value related: _____ Time
related: _____

Item

COMPLETION

24 **A24.0 PRACTICAL COMPLETION**

Clause 24.0

Fixed: _____ Value related: _____ Time
related: _____

Item

25 **A25.0 WORKS COMPLETION**

Clause 25.0

Fixed: _____ Value related: _____ Time
related: _____

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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

27 **A27.0 LATENT DEFECTS LIABILITY PERIOD**
Clause 27.0
Fixed: _____ Value related: _____ Time
related: _____

Item

28 **A28.0 SECTIONAL COMPLETION**
Clause 28.0
Fixed: _____ Value related: _____ Time
related: _____

Item

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

30 **A30.0 PENALTY FOR NON-COMPLETION**
Clause 30.0
Fixed: _____ Value related: _____ Time
related: _____

Item

PAYMENT

31 **A31.0 INTERIM PAYMENT TO THE CONTRACTOR**
Clause 31.0

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Clause 31.5.2 is amended by replacing "14.7.1" with "14.0"

Clause 31.8 is amended by replacing it with the following two alternative clauses:

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:

31.8(A).1 Ninety-five per cent (95%) of such value in interim **payment certificates** issued up to the date of **practical completion**

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**

31.8(A).3 Ninety-nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6

31.8(A).4 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 34.6 except where the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate**

Alternative B

31.8(B) Where **security** 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:

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

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

31.8(B).3 Ninety-nine per cent (99%) of such value in interim **payment certificates** issued on the date of **final completion** and up to but excluding the final **payment certificate** in terms of 34.6

31.8(B).4 One hundred per cent (100%) of such value in the final **payment certificate** in terms of 34.6 except where the amount certified is in favour of the **employer**. In such an event the payment reduction shall remain at the adjustment level applicable to the final **payment certificate**

Clause 31.12 is amended by deleting the following:

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

Fixed: _____ Value related: _____ Time related: _____

Item

32 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**"

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Item

33 A33.0 RECOVERY OF EXPENSE AND LOSS

Clause 33.0

Fixed: _____ Value related: _____ Time related: _____

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34	<p>A34.0 FINAL ACCOUNT AND FINAL PAYMENT</p> <p>Clause 34.0</p> <p>Clause 34.1 is amended by removing "#" next to 34.1</p> <p>Clause 34.2 is amended by inserting "#" next to 34.2</p> <p>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"</p> <p>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"</p> <p>Fixed:_____ Value related:_____ Time related:_____</p>	Item		
35	<p>A35.0 PAYMENT TO OTHER PARTIES</p> <p>Clause 35.0</p> <p>Fixed:_____ Value related:_____ Time related:_____</p>	Item		
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CANCELLATION

36 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**"

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

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

Fixed: _____ Value related: _____ Time related: _____

Item

37 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)"

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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: _____

Item

38 **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:

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

Fixed: _____ Value related: _____ Time related: _____

Item

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39	<p>A39.0 CANCELLATION - CESSATION OF THE WORKS</p> <p>Clause 39.0</p> <p>Clause 39.3.5 is amended by the addition of the following at the end of the sentence:</p> <p>"within one hundred and twenty (120) working days of completion of such a report"</p> <p>Fixed:_____ Value related:_____ Time related:_____</p> <p><u>DISPUTE</u></p>	Item		
40	<p>A40.0 DISPUTE SETTLEMENT</p> <p>Clause 40.0</p> <p>Clause 40.2.2 is amended by replacing "one (1) year" with "three (3) years"</p> <p>Clause 40.6 is amended by removing the reference to:</p> <p>No clause</p> <p>Clause 40.7.1 is amended by replacing "(10)" with "(15)" and by the addition of the following:</p> <p>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>Fixed:_____ Value related:_____ Time related:_____</p> <p><u>SUBSTITUTE PROVISIONS</u></p>	Item		
41	<p>A41.0 STATE CLAUSES</p> <p>Clause 41.0</p> <p>Fixed:_____ Value related:_____ Time related:_____</p>	Item		
<p>Carried to Abstract</p>			R	
<p>Section No.1 - Preliminaries Bill No. 1 Preliminaries</p>				

CONTRACT VARIABLES

42 **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: _____

Item

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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: _____ Value related: _____ Time related: _____

Item

B2.0 DOCUMENTS

B2.1 Checking of documents

Fixed: _____ Value related: _____ Time related: _____

Item

B2.2 Provisional bills of quantities

Fixed: _____ Value related: _____ Time related: _____

Item

B2.3 Availability of construction documentation

Fixed: _____ Value related: _____ Time related: _____

Item

B2.4 Interests of agents

Fixed: _____ Value related: _____ Time related: _____

Item

B2.5 Priced documents

Fixed: _____ Value related: _____ Time related: _____

Item

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

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B3.0 THE SITE

50 **B3.1 Defined works area**

Fixed: _____ Value related: _____ Time
related: _____

Item

51 **B3.2 Geotechnical investigation**

Fixed: _____ Value related: _____ Time
related: _____

Item

52 **B3.3 Inspection of the site**

Fixed: _____ Value related: _____ Time
related: _____

Item

53 **B3.4 Existing premises occupied**

Fixed: _____ Value related: _____ Time
related: _____

Item

54 **B3.5 Previous work - dimensional accuracy**

Fixed: _____ Value related: _____ Time
related: _____

Item

55 **B3.6 Previous work - defects**

Fixed: _____ Value related: _____ Time
related: _____

Item

56 **B3.7 Services - known**

Fixed: _____ Value related: _____ Time
related: _____

Item

57 **B3.8 Services - unknown**

Fixed: _____ Value related: _____ Time
related: _____

Item

58 **B3.9 Protection of trees**

Fixed: _____ Value related: _____ Time
related: _____

Item

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59 **B3.10 Articles of value**
Fixed: _____ Value related: _____ Time
related: _____

Item

60 **B3.11 Inspection of adjoining properties**
Fixed: _____ Value related: _____ Time
related: _____

Item

B4.0 MANAGEMENT OF CONTRACT

61 **B4.1 Management of the works**
Fixed: _____ Value related: _____ Time
related: _____

Item

62 **B4.2 Programme for the works**
Fixed: _____ Value related: _____ Time
related: _____

Item

63 **B4.3 Progress meetings**
Fixed: _____ Value related: _____ Time
related: _____

Item

64 **B4.4 Technical meetings**
Fixed: _____ Value related: _____ Time
related: _____

Item

65 **B4.5 Labour and plant records**
Fixed: _____ Value related: _____ Time
related: _____

Item

**B5.0 SAMPLES, SHOP DRAWINGS AND
MANUFACTURERS' INSTRUCTIONS**

66 **B5.1 Samples of materials**
Fixed: _____ Value related: _____ Time
related: _____

Item

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67 **B5.2 Workmanship samples**
Fixed: _____ Value related: _____ Time
related: _____

Item

68 **B5.3 Shop drawings**
Fixed: _____ Value related: _____ Time
related: _____

Item

69 **B5.4 Compliance with manufacturers' instructions**
Fixed: _____ Value related: _____ Time
related: _____

Item

B6.0 TEMPORARY WORKS AND PLANT

70 **B6.1 Deposits and fees**
Fixed: _____ Value related: _____ Time
related: _____

Item

71 **B6.2 Enclosure of the works**
Fixed: _____ Value related: _____ Time
related: _____

Item

72 **B6.3 Advertising**
Fixed: _____ Value related: _____ Time
related: _____

Item

73 **B6.4 Plant, equipment, sheds and offices**
Fixed: _____ Value related: _____ Time
related: _____

Item

74 **B6.5 Main notice board**
Fixed: _____ Value related: _____ Time
related: _____

Item

75 **B6.6 Subcontractors' notice board**
Fixed: _____ Value related: _____ Time
related: _____

Item

Carried to Abstract

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B7.0 TEMPORARY SERVICES

76 **B7.1 Location**

Fixed: _____ Value related: _____ Time
related: _____

Item

77 **B7.2 Water**

Fixed: _____ Value related: _____ Time
related: _____

Item

78 **B7.3 Electricity**

Fixed: _____ Value related: _____ Time
related: _____

Item

79 **B7.4 Telecommunication facilities**

Fixed: _____ Value related: _____ Time
related: _____

Item

80 **B7.5 Ablution facilities**

Fixed: _____ Value related: _____ Time
related: _____

Item

B8.0 PRIME COST AMOUNTS

81 **B8.1 Responsibility for prime cost amounts**

Fixed: _____ Value related: _____ Time
related: _____

Item

**B9.0 ATTENDANCE ON N/S
SUBCONTRACTORS**

82 **B9.1 General attendance**

Fixed: _____ Value related: _____ Time
related: _____

Item

83 **B9.2 Special attendance**

Fixed: _____ Value related: _____ Time
related: _____

Item

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84 **B9.3 Commissioning - fuel, water and electricity**
Fixed: _____ Value related: _____ Time
related: _____

Item

B10.0 FINANCIAL ASPECTS

85 **B10.1 Statutory taxes, duties and levies**
Fixed: _____ Value related: _____ Time
related: _____

Item

86 **B10.2 Payment for preliminaries**
Fixed: _____ Value related: _____ Time
related: _____

Item

87 **B10.3 Adjustment of preliminaries**
Clauses B10.3.1 and B10.3.2 are amended by replacing
"within fifteen (15) **working days** of taking possession
of the **site**" with "when submitting his priced **bills of**
quantities / lump sum document"
Fixed: _____ Value related: _____ Time
related: _____

Item

88 **B10.4 Payment certificate cash flow**
Fixed: _____ Value related: _____ Time
related: _____

Item

B11.0 GENERAL

89 **B11.1 Protection of the works**
Fixed: _____ Value related: _____ Time
related: _____

Item

90 **B11.2 Protection / isolation of existing / sectionally
occupied works**
Fixed: _____ Value related: _____ Time
related: _____

Item

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- 91 **B11.3 Security of the works**
Fixed: _____ Value related: _____ Time
related: _____
- 92 **B11.4 Notice before covering work**
Fixed: _____ Value related: _____ Time
related: _____
- 93 **B11.5 Disturbance**
Fixed: _____ Value related: _____ Time
related: _____
- 94 **B11.6 Environmental disturbance**
Fixed: _____ Value related: _____ Time
related: _____
- 95 **B11.7 Works cleaning and clearing**
Fixed: _____ Value related: _____ Time
related: _____
- 96 **B11.8 Vermin**
Fixed: _____ Value related: _____ Time
related: _____
- 97 **B11.9 Overhand work**
Fixed: _____ Value related: _____ Time
related: _____
- 98 **B11.10 Instruction manuals and guarantees**
Fixed: _____ Value related: _____ Time
related: _____
- 99 **B11.11 As built information**
Fixed: _____ Value related: _____ Time
related: _____

Item

Item

Item

Item

Item

Item

Item

Item

Item

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100	<p>B11.12 Tenant installations</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p>B12.0 SCHEDULE OF VARIABLES</p>	Item		
101	<p>B12.1 Schedule of variables</p> <p>Fixed: _____ Value related: _____ Time related: _____</p> <p>This schedule contains all variables referred to in this document and is divided into pre-tender and post-tender categories. The pre-tender category must be completed in full and included in the tender documents. Both the pre-tender and post-tender categories form part of these Preliminaries</p> <p>Spaces requiring information must be filled in, shown as "not applicable" or deleted and not left blank. Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided the information should be annexed hereto and cross-referenced to the applicable clause of the schedule. Key cross reference clauses are italicised in [] brackets</p> <p>12.1 PRE-TENDER INFORMATION</p> <p>12.1.1 Provisional bills of quantities [2.2] The quantities are provisional YES/NO</p> <p>12.1.2 Availability of construction documentation [2.3] <i>Construction documentation is complete</i> YES/NO</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 style="text-align: right;">Carried to Abstract</p> <p>Section No.1 - Preliminaries Bill No. 1 Preliminaries</p>	Item		R

12.1.6 **Existing premises occupied**
[3.4] Specific requirements:

12.1.7 **Previous work - dimensional accuracy**
[3.5] Details:

12.1.8 **Previous work - defects**
[3.6] Details:

12.1.9 **Services - known**
[3.7] Details:

12.1.10 **Protection of trees**
[3.9] Specific requirements:

12.1.11 **Inspection of adjoining properties**
[3.11] Specific requirements:

12.1.12 **Enclosure of the works**
[6.2] Specific requirements:

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

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12.1.14 **Main notice board**

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

12.1.15 **Subcontractors' notice board**

[6.6] A notice board is required
YES/NO
Specific requirements:

12.1.16 **Water**

[7.2] Option A (by **contractor**)
YES/NO

Option B (by **employer** - free of charge)
YES/NO

Option C (by **employer** - metered)
YES/NO

12.1.17 **Electricity**

[7.3] Option A (by **contractor**)
YES/NO

Option B (by **employer** - free of charge)
YES/NO

Option C (by **employer** - metered)
YES/NO

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12.1.18 **Telecommunications**

[7.4] Telephone YES/NO

Facsimile YES/NO

E-mail YES/NO

12.1.19 **Ablution facilities**

[7.5] Option A (by **contractor**) YES/NO

Option B (by **employer**) YES/NO

12.1.20 **Protection of existing/sectionally occupied works**

[11.2] Protection is required YES/NO

12.1.21 **Special attendance**

[9.2] **Subcontractor** (1) details:

Subcontractor (2) details:

Subcontractor (3) details:

Subcontractor (4) details:

12.1.22 **Protection of the works**

[11.1] Specific requirements:

12.1.23 **Disturbance**

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

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12.1.24 **Environmental disturbance**
[11.6] Specific requirements:

12.2 POST-TENDER INFORMATION

12.2.1 **Payment of preliminaries**
[10.2] Option A (prorated)
YES/NO

Option B (calculated)
YES/NO

12.2.2 **Adjustment of preliminaries**
[10.3] Option A (three categories)
YES/NO

Option B (detailed breakdown)
YES/NO

12.2.3 **Additional agreed preliminaries items**
Details:

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SECTION C: SPECIFIC PRELIMINARIES

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

102 **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 agent**

Fixed: _____ Value related: _____
Time related: _____

Item

103 **C2.0 GENERAL PREAMBLES**

The document "Specification of Materials and Methods to be used (PW371)" is obtainable on the Department's website (<http://www.publicworks.gov.za/> under "Consultants Guidelines"), and shall be read in conjunction with the **bills of quantities / lump sum document** and be referred to for the full descriptions of work to be done and materials to be used

Fixed: _____ Value related: _____
Time related: _____

Item

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104	<p>C3.0 TRADE NAMES</p> <p>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</p> <p>If prior written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item			
105	<p>C4.0 IMPORTED MATERIALS AND EQUIPMENT</p> <p>Where imported items are listed in the tender documents, the tenderer shall provide all the information called for, failing which the price of any such item, materials or equipment shall be excluded from currency fluctuations. (refer to Schedule of Imported Materials and Equipment DPW-23(EC) to be completed by tenderer)</p> <p>Notwithstanding any provisions elsewhere regarding the adjustment of contract prices, the price of any item, material or equipment listed in terms of this clause shall be excluded from the Contract Price Adjustment Provisions (if applicable)</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item			
106	<p>C5.0 VIEWING THE SITE IN SECURITY AREAS</p> <p>The site is situated in a security area and the tenderer must arrange with the unit commander or other responsible officer to obtain permission to enter the site for tendering purposes</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item			
<p>Carried to Abstract</p> <p>Section No.1 - Preliminaries Bill No. 1 Preliminaries</p>			R		

107 **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: _____

Item

108 **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: _____

Item

109 **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: _____

Item

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110	<p>C9.0 PROHIBITION ON TAKING OF PHOTOGRAPHS</p> <p>In terms of article 119 of the Defence Act, 44 of 1957, it is prohibited to sketch or to take photographs of any military site or installation or any building or civil works thereon or to be in possession of a camera or other apparatus used for taking of photographs except when authorized thereto by or on behalf of the Minister</p> <p>The same prohibition is also applicable to all correctional institutions in terms of article 44.1(e) of the Correctional Services Act 8 of 1959</p> <p>Fixed: _____ Value related: _____ Time related: _____</p>	Item			
111	<p>C10.0 HIV/AIDS AWARENESS</p> <p>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</p> <p>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>				
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C10.1 AWARENESS CHAMPION

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

Fixed: _____ Value related: _____
Time related: _____

Item

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: _____

Item

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: _____

Item

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: _____

Item

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	<p>C10.5 MONITORING</p> <p>Monitoring HIV/AIDS awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification</p> <p>Fixed:_____ Value related:_____</p> <p>Time related:_____</p>	Item		
112	<p>C11.0 OCCUPATIONAL HEALTH AND SAFETY ACT</p> <p>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), edition 23 Code of Practice</p> <p>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</p> <p>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</p> <p>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</p> <p>Fixed:_____ Value related:_____</p> <p>Time related:_____</p>	Item		
	<p style="text-align: right;">Carried to Abstract</p> <p>Section No.1 - Preliminaries Bill No. 1 Preliminaries</p>		R	

113 **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:_____

Item

114 **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 7

Fixed:_____ Value related:_____
Time related:_____

Item

115 **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:_____

Item

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116	<p>C11.4 HEALTH AND SAFETY FILE (Construction Regulation 7(1)(b))</p> <p>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</p> <p>Fixed:_____ Value related:_____</p> <p>Time related:_____</p>	Item			
117	<p>C11.5 SUPERVISION OF CONSTRUCTION WORK (SAFETY OFFICER) (Construction Regulation 8.5(6))</p> <p>The Contractor shall appoint a full-time competent employee in writing as the construction supervisor, with the duty of supervising the construction work.</p> <p>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</p> <p>Fixed:_____ Value related:_____</p> <p>Time related:_____</p>	Item			
<div>Carried to Abstract</div> <div>Section No.1 - Preliminaries</div> <div>Bill No. 1</div> <div>Preliminaries</div>					
			R		

118 **C11.6 RISK ASSESSMENT AND CONSTRUCTION WORK
(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:_____ Value related:_____

Time related:_____

Item

119 **C11.7 SIGNIFICANT HAZARDA IDENTIFICATION
RISK ASSESSMENT PREPARED BY THE DESIGN
CONSULTANTS (Construction Regulation 9)**

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:_____

Item

120 **C11.8 ADDITIONAL FINANCIAL PROVISION (CR 5(1)(g))**

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:_____

Item

Carried to Abstract

R

Section No.1 - Preliminaries
Bill No. 1
Preliminaries

121	<p>C11.9 FALL PROTECTION PLAN (Construction Regulation 10)</p> <p>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</p> <p>Fixed:_____ Value related:_____</p> <p>Time related:_____</p>	Item			
122	<p>C11.10 PHYSICAL AND PSYCHOLOGICAL FITNESS (Construction Regulation 7(8))</p> <p>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</p> <p>Fixed:_____ Value related:_____</p> <p>Time related:_____</p>	Item			
123	<p>C11.11 CONSTRUCTION VEHICLES AND MOBILE PLANT (Construction Regulation 23)</p> <p>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</p> <p>Fixed:_____ Value related:_____</p> <p>Time related:_____</p>	Item			
124	<p>C11.12 TRAINING (Construction Regulation 8 (c))</p> <p>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</p> <p>Fixed:_____ Value related:_____</p> <p>Time related:_____</p>	Item			
Carried to Abstract				R	
Section No.1 - Preliminaries					
Bill No. 1					
Preliminaries					

125	<p>C11.13 DEMOLITION WORK (Construction Regulation 14)</p> <p>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.</p> <p>Fixed:_____ Value related:_____</p> <p>Time related:_____</p>	Item			
126	<p>C11.14 REMOVAL AND DISPOSAL OF ASBESTOS MATERIAL (Asbestos Abatement Regulation)</p> <p>The principle contractor shall appoint a contractor that is registered with the Department of Labour as an AIA. The contractor must allow for;</p> <p>NOTIFICATION OF ASBESTOS PROCESSING PERSONAL PROTECTIVE EQUIPMENT PACKAGING AND TRANSPORT AND STORAGE TO DISPOSAL SITE DEMOLITION WORK OF SHEETS LABELLING AND INFORMATION</p> <p>Fixed:_____ Value related:_____</p> <p>Time related:_____</p>	Item			
Carried to Abstract			R		
Section No.1 - Preliminaries					
Bill No. 1					
Preliminaries					

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

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

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

Filling in general shall be compacted to the prescribed percentage Mod AASHTO density

Filling in sub-layers, under floors, etc

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

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

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

CBR and indicator tests

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

Results of these tests are to be submitted to and approved by the principal agent prior to commencement of any placement thereof and/or filling done therewith

Density tests

Density tests for monitoring filling shall be done at the minimum prescribed frequencies per each 150mm thick layer of filling placed

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Section No.2 - Buildings
Bill No. 1
Foundations (Provisional)

R

It will be required from the contractor to execute density tests for monitoring filling at the following minimum frequencies per each filling layer placed:

- *Filling under surface beds, aprons, channels, etc:*
1 Test per 125m² plan area per each 150mm thick layer
- *Filling behind retaining walls:*
1 Tests per each 10m length of retaining wall

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

Carting away excessive and/or unsuitable excavated material

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

The location of the intended dumping site will be subjected to the prior written approval of the principal agent

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

Tendered rates must make provision for the above-mentioned as no additional claims in this regard will afterwards be entertained

Soil poisoning and insecticide

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

Carried to Abstract

Section No.2 - Buildings
Bill No. 1
Foundations (Provisional)

R

Pest control applicators must provide :

1. Proof of pesticides and insecticides (data sheets)
2. Toxicants must be registered with the Department of Agriculture
2. Proof that they are qualified to perform the work
3. Five year guarantee certificate

Measurement and payment

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

Subterranean water

No information regarding subterranean water is available. The tenderer must acquit himself of the presence and depth of subterranean water and allow therefore in his prices

The following are typical examples of descriptions of "nature of ground"

Key:

Location Description:

- | | |
|-----|-------------------------|
| [A] | 2 x Grade R Classroom |
| [E] | 3 Grade R and 1 Teacher |

EXCAVATION, FILLING, ETC

Excavation in earth not exceeding 2m deep

1	Reduced levels under floors A : 25 E : 1	m ³	26
2	Trenches A : 86 E : 42	m ³	128
3	Holes A : 1 E : 40	m ³	41
4	Trenches and holes for thickening under surface bed, etc A : 1 E : 0	m ³	1

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Foundations (Provisional)

R

<u>Extra over trench and hole excavations in earth for excavation in</u>					
5	Soft rock A : 10 E : 9	m ³	19		
6	Hard rock A : 4 E : 5	m ³	10		
<u>Back excavation of vertical sides of excavations in earth for working space including soilcrete 8% batch mixing</u>					
7	Exceeding 1,5m and not exceeding 3m deep for placing and removing formwork to walls etc, 500mm away from excavated face A : 0 E : 39	m ²	39		
8	Extra over for excavation in soft rock A : 0 E : 4	m ²	4		
9	Extra over for excavation in hard rock A : 0 E : 2	m ²	2		
<u>Extra over all excavations for carting away</u>					
10	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor A : 23 E : 52	m ³	74		
<u>Risk of collapse of excavations</u>					
11	Sides of trench and hole excavations not exceeding 1,5m deep A : 254 E : 119	m ²	373		
12	Sides of trench and hole excavations exceeding 1,5m deep A : 0 E : 39	m ²	39		
<u>Keeping excavations free of water</u>					
13	Keeping excavations free of all water other than subterranean water		Item		
<u>G5 filling obtained from excavations compacted to 95% Mod AASHTO density</u>					
14	Under floors, steps, pavings, etc A : 124 E : 5	m ³	129		
Carried to Abstract				R	
Section No.2 - Buildings Bill No. 1 Foundations (Provisional)					

15	Backfilling to trenches, holes, etc A : 17 E : 7 <u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density</u>	m ³	24		
16	Under floors, steps, pavings, etc A : 25 E : 1 <u>Coarse river sand filling supplied by the contractor</u>	m ³	26		
17	Under floors etc A : 12 E : 1 <u>Garden soil filling obtained from the excavations and/or prescribed stockpiles on site (not compacted)</u>	m ³	13		
18	Over site A : 0 E : 13 <u>SOIL POISONING</u> <u>Soil insecticide</u>	m ³	13		
19	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming A : 258 E : 97	m ²	355		
20	To bottoms and sides of trenches A : 312 E : 161 <u>CONCRETE</u> <u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u> <u>15MPa/19mm concrete</u>	m ²	474		
21	Surface blinding under footings and bases A : 3 E : 2 <u>REINFORCED CONCRETE</u> <u>25MPa/19mm concrete</u>	m ³	5		
22	Strip footings A : 15 E : 11	m ³	26		
Carried to Abstract				R	
Section No.2 - Buildings Bill No. 1 Foundations (Provisional)					

MOVEMENT JOINTS, ETC

Expansion joints with softboard between vertical concrete surfaces

23	12mm Joints not exceeding 300mm high A : 22 E : 0	m	22		
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BRICKWORK

(CPAP FORMULA WORK GROUP NO. 116)

FOUNDATIONS (PROVISIONAL)

Blockwork in class II mortar with cores filled solid with mortar

24	M200 Block cavity Walls below ground level A : 0 E : 46	m ²	46		
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Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar

25	One brick walls A : 99 E : 44	m ²	143		
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Brickwork reinforcement

26	150mm Wide reinforcement built in horizontally A : 1168 E : 1053	m	2 221		
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"COROBRICK" firelight satin face bricks pointed with recessed horizontal and vertical joints

27	Extra over brickwork for face brickwork A : 99 E : 44	m ²	143		
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Brick-on-edge header course copings, sills, etc of "COROBRICK" firelight satin face bricks, pointed with recessed joints on all exposed faces

28	230mm Wide tread to steps(Provisional) A : 0 E : 3	m	3		
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REINFORCEMENT (PROVISIONAL)

(CPAP FORMULA WORK GROUP NO. 114)

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Bill No. 1
Foundations (Provisional)

R

[illegible]

[illegible]

Reinforced concrete

All reinforced concrete is to be compacted with a mechanical vibrator

Formwork

Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use

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

Formwork to 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"

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"

Formwork to soffits of solid slabs, etc shall be deemed to be slabs not exceeding 200mm thick unless otherwise described

Degree of accuracy of formwork: Grade 2 as SANS 1280G

Permissible deviations:

Flatness of plain surface - 5mm

Abrupt changes in a continuous surface - 5mm

Supervision

A competent and experienced foreman shall supervise personally the whole of the concrete construction and pay special attention to:

Carried to Abstract

Section No.2 - Buildings

Bill No. 2

Concrete, formwork and reinforcement

R

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

The contractor shall obtain the permission of the engineer or principal agent before commencing concreting of foundations, surface beds and reinforced structure

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

Reinforcement

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

Key:

Location Description:

[A] 2 x Grade R Classroom
[E] 3 Grade R and 1 Teacher

REINFORCED CONCRETE

25MPa/19mm concrete

1	Surface beds on waterproofing A : 26 E : 4	m ³	29
2	Slabs including beams and inverted beams A : 0 E : 4	m ³	4

Carried to Abstract

Section No.2 - Buildings
Bill No. 2
Concrete, formwork and reinforcement

R

- | | |
|----|---|
| No | 5 |
|----|---|

Finishing top surfaces of concrete smooth with a wood float

- | | |
|----------------|-----|
| m ² | 279 |
|----------------|-----|

Finishing top surfaces of concrete smooth with a steel trowel including rounding edges to form a bullnose finish

- m
- ²
- 22

SMOOTH FORMWORK (DEGREE OF ACCURACY II)

(CPAP FORMULA WORK GROUP NO. 111)

Smooth formwork to

- | | |
|----------------|----|
| m ² | 22 |
|----------------|----|

Rough formwork to form

- | | |
|----|---|
| No | 5 |
|----|---|

MOVEMENT JOINTS ETC

Expansion joints with closed cell expanded polystyrene joint filler between vertical concrete and/or brick surfaces

- | | |
|---|----|
| m | 22 |
|---|----|

REINFORCEMENT (PROVISIONAL)

(CPAP FORMULA WORK GROUP NO. 114)

R

-65-

High tensile steel reinforcement to structural concrete work

9 Rod reinforcement in concrete beams, slabs, etc.
(Provisional)

A : 0.00 E : 2.65

t 2.65

Fabric reinforcement

10 Type 193 fabric reinforcement in concrete surface beds,
slabs, etc

A : 247 E : 54

m² 301

Carried to Abstract

R

Section No.2 - Buildings
Bill No. 2
Concrete, formwork and reinforcement

[illegible]

Item No		Unit	Quantity	Rate	Amount R
	<p><u>SECTION 2</u></p> <p><u>BILL NO 3</u></p> <p><u>PRECAST CONCRETE</u></p> <p><u>PREAMBLES</u></p> <p>For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Sizes</u></p> <p>Blocks, sills, etc measured linear shall be made in suitable lengths. Large size setting out drawings shall be prepared where necessary and submitted to the principal agent for approval before moulds are made</p> <p><u>General</u></p> <p>Where kerbstones, blocks, etc are laid in ground descriptions shall be deemed to include necessary excavation, filling in and ramming</p> <p><u>Key:</u> <u>Location Description:</u></p> <p>[A] 2 x Grade R Classroom</p> <p>[E] 3 Grade R and 1 Teacher</p> <p><u>PRECAST CONCRETE SLABS ETC</u></p> <p><u>Precast concrete cover slab 100mm thick formed of 25MPa/19mm concrete with class 1 smooth finish on exposed surfaces splayed 25mm at edges with ref. 193 mesh reinforcement and 2no. Threaded 15mm diameter polycop pipe sleeves cast in to receive 2no. Threaded 10mm diameter galvanised L-shaped lifting handles with 50 x 50 x 5mm holed plates, nuts and lock nuts, including holes to fit 110mm diameter vent pipe, etc. laid on brick walls.</u></p>				
1	<p>1 115 x 375 x 100mm Thick cover slab including bedding edges all round</p> <p style="padding-left: 40px;">A : 0 E : 8</p>	No	8		
	Carried to Abstract				
	<p>Section No.2 - Buildings</p> <p>Bill No. 3</p> <p>Precast concrete</p>			R	

2	2 130 x 375 x 100mm Thick cover slab including bedding edges all round A : 0 E : 2 <u>PAVING (Provisional)</u> <u>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 a vibration compactor</u>	No	2		
3	Paving to play areas etc. To falls. A : 42 E : 0	m²	42		
Carried to Abstract				R	
Section No.2 - Buildings Bill No. 3 Precast concrete					

[illegible]

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

Brickwork

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

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

Brickwork reinforcement

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

Centres and turning pieces

Centres and turning pieces to soffits of arches and lintels shall be left in position for not less than 14 days

Face bricks

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%

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Section No.2 - Buildings
Bill No. 4
Masonry

R

Particular care shall be taken to preserve arrisses and faces of face and paving bricks during transit and handling

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

All cutting to face bricks must be done by cutting saw and prices to include for the use of mechanical cutting saws

Pointing

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

Samples

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

Key:

Location Description:

[A]

2 x Grade R Classroom

[E]

3 Grade R and 1 Teacher

Brickwork of NFP bricks in class II mortar

1	Half brick walls A : 28 E : 2	m ²	30
2	Half brick walls in beamfilling A : 27 E : 4	m ²	31
3	One brick walls A : 161 E : 68	m ²	230

BRICKWORK SUNDRIES

Carried to Abstract

Section No.2 - Buildings
Bill No. 4
Masonry

R

<u>Brickwork reinforcement</u>					
4	75mm Wide reinforcement built in horizontally A : 109 E : 31	m	139		
5	150mm Wide reinforcement built in horizontally A : 588 E : 277	m	864		
<u>Prestressed fabricated lintels</u>					
6	110 x 75mm Lintels in lengths not exceeding 3m A : 38 E : 9	m	48		
<u>Galvanised hoop iron cramps, ties, etc</u>					
7	30 x 1,6mm Roof tie 1,5m long with one end fixed to timber and other end built into brickwork A : 0 E : 22	No	22		
<u>Air bricks etc</u>					
8	229 x 76mm Clay vermin proof air brick A : 58 E : 0	No	58		
<u>FACE BRICKWORK</u>					
<u>"COROBRICK" firelight satin face bricks pointed with recessed horizontal and vertical joints</u>					
9	Extra over brickwork for face brickwork A : 216 E : 47	m ²	263		
<u>Brick-on-edge header course copings, sills, etc of "COROBRICK" firelight satin face bricks, pointed with recessed joints on all exposed faces</u>					
10	180mm Wide sill set sloping and slightly projecting A : 23 E : 3	m	26		
<u>NUTEC-CEMENT WINDOW SILLS</u>					
<u>Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc</u>					
11	15 x 150mm Wide sills set flat and slightly projecting A : 23 E : 3	m	26		
Carried to Abstract					
Section No.2 - Buildings Bill No. 4 Masonry				R	

[illegible]

<u>One layer of 250 micron "Consol Plastics Gunplas USB Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>					
2	Under surface beds A : 247 E : 10	m ²	257		
<u>WATERPROOFING TO BASEMENTS</u>					
<u>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 and 150mm end laps</u>					
3	On floors A : 0 E : 22	m ²	22		
4	On walls A : 0 E : 39	m ²	39		
5	On turn-ups and turn-downs exceeding 300mm girth edit this A : 0 E : 7	m ²	7		
Carried to Abstract				R	
Section No.2 - Buildings Bill No. 5 Waterproofing					

[illegible]

	<u>0,6mm "SAFINTRA WIDEDEK (RAIN CLOUD)" steel sheeting or similar approved complete</u>				
1	Roof covering with pitch not exceeding 25 degrees A : 324 E : 38	m ²	362		
	<u>0,6mm "SAFINTRA WIDEDEK (RAIN CLOUD)" steel sheeting or similar approved complete accessories to preceding roof coverings</u>				
2	Ridge cappings 462mm girth A : 24 E : 7	m	31		
3	Narrow and broad flute closers A : 24 E : 7	m	31		
4	Moulded narrow and broad rib polyethelene filler blocks A : 24 E : 7	m	31		
	<u>ROOF AND WALL INSULATION</u>				
	<u>"Sisalation 410" housing grade glass fibre reinforced aluminium foil bonded insulation</u>				
5	Insulation laid taut over purlins (at approximately 1 100mm centres) and fixed concurrent with roof covering including galvanised steel straining wires A : 324 E : 38	m ²	362		
Carried to Abstract					R
Section No.2 - Buildings Bill No. 6 Roof coverings, claddings, etc					

[illegible]

- 1 Bolts up to 8mm diameter:
Washers shall be minimum 25mm wide of minimum 2,50mm thickness
- 2 Bolts up to 12mm diameter:
Washers shall be minimum 36mm wide of minimum 4,00mm thickness
- 3 Bolts up to 20mm diameter:
Washers shall be minimum 60mm wide of minimum 5,00mm thickness

Metal connector plates

Metal connector plates shall be fabricated out of not less than 1mm thick drawn quality galvanised steel

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/m² commercial class hot dipped galvanising as per SANS 934 before stamping

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

Truss construction

Trusses shall be constructed in jigs specially designed to ensure the correct profile, overhangs and cambers

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

Truss design

All trusses shall be designed by a registered Professional Engineer in accordance with SANS 0163 ("Design of Timber Structures") and Code 0160 ("Loadings")

Truss spacing

The truss centres shall be less than or equal to that as described in this bill for each respective truss

Truss pitch

The truss pitch shall be as described in this bill for each respective truss type

Carried to Abstract

Section No.2 - Buildings
Bill No. 7
Carpentry and joinery

R

Truss loading

Trusses shall be designed for a live load of 0,50kN/m² and dead load as specified below

Shop drawings, design and erection guarantee certificates

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

Dimensions

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

Erection

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

Design system

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

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

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

Carried to Abstract

Section No.2 - Buildings
Bill No. 7
Carpentry and joinery

R

Rates

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

Prices for trusses must also include for:

1. Unloading and storing under cover and protecting from the weather, or handing over to others for unloading and storing as required
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:
 - 2.1 themselves (when responsible for erection)
 - 2.2 others (where applicable)
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

Fixing of purlins

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

GENERAL CARPENTRY AND JOINERY

Fixing

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

Carried to Abstract

R

Section No.2 - Buildings
Bill No. 7
Carpentry and joinery

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

Joinery

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

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

Particle board

Particle board shall comply with the following specifications:

- a) SANS 1300 Particle board: exterior and flooring type
- b) SANS 1301 Particle board: interior type

Decorative laminate finish

Decorative laminate finishes shall be glued under pressure

All edge strips shall be butt jointed at junctions with adjacent similar finish

Hardwoods

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

Sealing of all abutments

All cupboards, counter tops, shelves, etc. abutting walls, tiled surfaces, etc. to be sealed watertight with an approved silicon sealant along all joints

Tendered rates must make provision for this as no additional claims in this regard will afterwards be entertained

Carried to Abstract

Section No.2 - Buildings
Bill No. 7
Carpentry and joinery

R

Plate nailed timber roof truss construction

The following is applicable in respect of roof trusses:

Trusses are at maximum 1,10m centres

Roof 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.

Key:

Location Description:

[A]

2 x Grade R Classroom

[E]

3 Grade R and 1 Teacher

**PLATE NAILED TIMBER ROOF TRUSS
CONSTRUCTION ETC**

Carried to Abstract

Section No.2 - Buildings
Bill No. 7
Carpentry and joinery

R

<u>Sawn softwood</u>					
1	38 x 114mm Wall plates A : 48 E : 13	m	62		
2	Design, manufacture and deliver on site, plate nailed roof truss construction to Toilet Block (1Grade R Play Area), size 11,703 x 4,244mm overall on plan consisting of fourteen mono pitched trusses, each truss 8 476 x 900mm high overall with 500mm eaves overhang projecting one sides, including all necessary purlins, runners, bracing and cross bracing (wall plates elsewhere) A : 1 E : 0	No	1		
3	Design, manufacture and deliver on site, plate nailed roof truss construction to Toilet Block (3R1T), size 5,920 x 4,820mm overall on plan consisting of eight double pitched trusses, each truss 4 820 x 900mm high overall with 500mm eaves overhang projecting both sides, including all necessary purlins, runners, bracing and cross bracing (wall plates elsewhere) A : 0 E : 1	No	1		
4	Design, manufacture and deliver on site, plate nailed roof truss construction to Toilet Block (2Grade R), size 22,806 x 10,348mm overall on plan consisting of twenty nine double pitched trusses, each truss 10 348 x 900mm high overall with 500mm eaves overhang projecting both sides, including all necessary purlins, runners, bracing and cross bracing (wall plates elsewhere) A : 1 E : 0	No	1		
5	Take delivery, temporary store, hoist in position and erect plate nailed timber roof trusses, purlins, gangboarding, temporary and permanent bracing, etc (measured on slope of roof) A : 324 E : 38	m ²	362		
<u>Sundries</u>					
6	Two coats creosote on sawn timbers A : 29 E : 8	m ²	37		
<u>EAVES , VERGES , ETC</u>					
Carried to Abstract				R	
Section No.2 - Buildings Bill No. 7 Carpentry and joinery					

"Marley" PVC socketless fascias and boards

- 7 12 x 225mm Fascias boards including aluminium H-profile jointing strips

A : 48 E : 13

m

62

- 8 200 x 800mm Barge boards including aluminium H-profile jointing strips

A : 29 E : 13

m

42

DOORS ETC

Wrought hardwood flushback doors with sapele veneer hung to steel frames

- 9 44mm "TDM" Framed and ledged door 813 x 2032mm high

A : 4 E : 2

No

6

Hardwood stable doors with sapele veneer on both sides hung to wooden frames

- 10 32mm Medium duty hardboard faced interior door 813 x 1500mm high with 50 x 25 LD polished barrel bolts, 100 x 75mm LD medium duty brass butt hinge

A : 0 E : 4

No

4

FRAMES ETC

FRAMED FRAMES, MULLIONS, TRANSOMS, ETC

Wrought hardwood

- 11 77 x 64mm Rebated and angle rounded frame for 813 x 1500mm high door

A : 0 E : 4

No

4

Carried to Abstract

Section No.2 - Buildings
Bill No. 7
Carpentry and joinery

R

[illegible]

<u>Key:</u>		<u>Location Description:</u>					
[A]		2 x Grade R Classroom					
[E]		3 Grade R and 1 Teacher					
<u>"Aerolite" insulation</u>							
75mm Insulation closely fitted and laid on top of brandering between roof timbers etc				m²	190		
A : 190 E : 0							
<u>NAILED UP CEILINGS</u>							
<u>6.4mm "Rhino" gypsum plasterboard with H-type pressed steel jointing strips</u>							
Ceilings including 38 x 38mm sawn softwood brandering at 400mm centres				m²	190		
A : 190 E : 0							
Extra over ceiling for 650 x 650mm trap door of 38 x 50mm wrought softwood rebated framing with one 38 x 50mm sawn softwood cross brander covered with ceiling board and fitted flush in opening				No	2		
A : 2 E : 0							
<u>"Rhino" gypsum plasterboard cornices</u>							
75mm Coved cornices				m	97		
A : 97 E : 0							

[illegible]

Item No		Unit	Quantity	Rate	Amount R
	<u>SECTION 2</u>				
	<u>BILL NO. 9</u>				
	<u>FLOOR COVERINGS, PLASTIC LININGS, ETC</u>				
	<u>PREAMBLES</u>				
	For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	NOTE : Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 130 for CPAP formula purposes				
	<u>Fixing</u>				
	Floor coverings, wall linings, etc shall, where applicable, be fixed with adhesive as recommended by the manufacturers of the flooring, linings, etc				
	<u>Key:</u>				

2	50 x 25 LD polished barrel bolts A : 0 E : 5 <u>LOCKS</u> <u>"Union"</u>	No	5	
3	"CZ682-24/2247-78" or other similar and approved four lever lockset with striking plate fixed to metal or timber A : 4 E : 2	No	6	
4	Brass padlock A : 0 E : 4 <u>LETTERS, NAMEPLATES, ETC</u> <u>"Union"</u>	No	4	
5	"AL5022-E10" 152 x 152mm anodised aluminium plate with male symbol A : 0 E : 1	No	1	
6	"AL5022-E11" 152 x 152mm anodised aluminium plate with female symbol A : 0 E : 1	No	1	
7	"AL5022-E14" 152 x 152mm anodised aluminium plate with paraplegic symbol A : 0 E : 1 <u>BATHROOM FITTINGS</u> <u>"Stiebel Eltron"</u>	No	1	
8	"PTFS-S" Paper towel dispenser plugged A : 0 E : 5	No	5	
9	"SDSS" Soap dispenser plugged A : 0 E : 5 <u>"Nampak"</u>	No	5	
10	"TR2" lockable toilet roll holder plugged A : 0 E : 5 <u>"Chairman Industries"</u>	No	5	
11	32mm Type DL2 side grab rail plugged A : 0 E : 1	No	1	
Carried to Abstract				
Section No.2 - Buildings Bill No. 10 Ironmongery				

12	32mm Type SR2 rear grab rail plugged A : 0 E : 1	No	1		
<u>SUNDRIES</u>					
<u>"Union"</u>					
13	"AL8730AS" door stop plugged A : 4 E : 4	No	8		
14	"AL8722AS" rubber tipped hat and coat hook A : 0 E : 4	No	4		
<u>STEEL LOCKERS</u>					
<u>"Greenfield Baseline Guardsman" Steel lockers with standard baked enamel finish</u>					
15	"GB002" locker 300 x 450 x 1 800mm high A : 30 E : 0	No	30		
<u>WRITING BOARDS, PINNING BOARD, ETC</u>					
<u>"Virtrex" vitreous enamelled writing boards, etc to SABS CSK-36-1980</u>					
16	Green writing board 4 800 x 1 140mm high consisting of two fixed panels each 2 400 x 1 140mm high complete with aluminium chalk rail, etc, plugged A : 2 E : 0	No	2		
<u>"Parrot products"</u>					
17	"BD0476" 2 400 x 1 200mm Aluminium framed carpet bulletin board A : 6 E : 0	No	6		
Carried to Abstract					
Section No.2 - Buildings Bill No. 10 Ironmongery				R	

[illegible]

Item No	Unit	Quantity	Rate	Amount R
<u>SECTION 2</u>				
<u>BILL NO. 11</u>				
<u>METALWORK</u>				
<u>PREAMBLES</u>				
For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Primer</u>				
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.				
<u>Descriptions</u>				
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				
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				
Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described				
Carried to Abstract				R
Section No.2 - Buildings				
Bill No. 11				
Metalwork				

Welded joints and intersections

Prices of continuous rails shall include for welded joints in the length and prices of intersections shall include all cutting, mitring, scribing, shaping, etc

Bends, knees, ramps and the like to continuous rails shall be forged and rounded to approved radii

Prices for balustrades, burglar guards and the like shall include for framed and welded joints at intersections

Screws and bolts

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

Items fixed to adjoining metalwork with rivets, self-tapping screws, machine screws, etc shall include all necessary drillings

Where bolting is specified, projecting shank ends of bolts shall be cut off flush and left smooth

Door frames

Unless otherwise described, the following shall be applicable on all door frames:

- Frames shall be double rebated suitable for 40mm thick doors
- One jamb of all frames for single doors shall be factory prepared for striking plate of mortice lock
- All frames shall be factory fitted with three washered butt hinges for each door
- All frames shall be treated with one coat factory applied metal primer complying with SANS Specification 909

Striking plates for door frames

Striking plates to be of chromium-plated type, unless otherwise described

Carried to Abstract

Section No.2 - Buildings
Bill No. 11
Metalwork

R

Sealing of all abutments

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

NOTE :

Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 136 for CPAP formula purposes

Key:

Location Description:

[A]

2 x Grade R Classroom

[E]

3 Grade R and 1 Teacher

WELDED SCREENS, GATES, ETC

Steel gates and frames

- 1 Single gate and frame for opening 813 x 2 032mm 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 813 x 2 032mm 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 three lever lock (D7)

A : 2

E : 1

No

3

PRESSED STEEL DOOR FRAMES

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

- 2 Frame for door 813 x 2 032mm high

A : 4

E : 2

No

6

Carried to Abstract

Section No.2 - Buildings
Bill No. 11
Metalwork

R

<u>STEEL WINDOWS, DOORS, ETC</u>				
<u>Standard industrial windows with type "B1" burglar bars to opening sashes</u>				
3	Window, 889 x 457mm high A : 4 E : 4	No	8	
4	Window type E4, 1 511 x 654mm high A : 12 E : 0	No	12	
5	Window type SS52, 1 616 x 987mm high A : 10 E : 0	No	10	
<u>Hot dipped galvanised mild steel post</u>				
6	73mm diameter x4mm thick x approximately 2900mm high hollow section hot dipped galvanised mild steel posts with 200 200 6mm U-shaped beam support four times holed on both sides welded on top end and 200 x 200 12mm thick base plate with four times holed and plugged to concrete with M 12 Cemical anchors and plugged to concrete with M12 Chemical anchors (Bolts elsewhere measured) A : 11 E : 0	No	11	
7	M12 x 100mm Chemical anchor bolts A : 44 E : 0	No	44	
8	25 x 25 x 3mm Angle purlin bolted to frame A : 28 E : 0	m	28	
9	12 x 100mm bolts A : 44 E : 0	No	44	
<u>Play Ground Equipment</u>				
10	Allow the Provisional Amount of R80 000.00 (Eighty Thousand Rands) NET for complete installations of jungle gym, play ground equipment and sandpit area. A : 1.00 E : 0.00		Item	80 000.00
11	Add for Profit on above item		Item	
12	Add for Attendance on above item		Item	
Carried to Abstract			R	
Section No.2 - Buildings Bill No. 11 Metalwork				

[illegible]

Item No	Unit	Quantity	Rate	Amount R
<p><u>SECTION 2</u></p> <p><u>BILL NO. 12</u></p> <p><u>PLASTERING</u></p> <p><u>PREAMBLES</u></p> <p>For preambles see "Construction Specifications - General Specification (PW371-A)" and "Construction Specifications - Particular Specification (PW371-B)"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Preparatory work</u></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><u>Finish</u></p> <p>All coats of paving and plastering shall be executed in one operation without any blemishes</p> <p><u>Granolithic</u></p> <p>Granolithic shall be cured for at least seven days after laying</p> <p>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</p> <p>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>				
Carried to Abstract				R
<p>Section No.2 - Buildings</p> <p>Bill No. 12</p> <p>Plastering</p>				

Skirtings

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

Plaster

All plaster, other than skim plaster, shall not be less than 10mm and not more than 20mm thick

General

Rates for plastering described as being on walls shall include concrete columns, beams and lintels flush with the face of the wall

Textured finishes

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

Preparatory work for textured finishes

Textured finishes to be applied to surfaces as described. Rates tendered are to include for all necessary priming, preparatory work, etc

All surfaces are to be inspected and approved by the principal agent prior any work is commenced

NOTE :

Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 142 for CPAP formula purposes.

Key:

Location Description:

[A]

2 x Grade R Classroom

[E]

3 Grade R and 1 Teacher

GRANOLITHIC

Untinted granolithic on concrete

Carried to Abstract

Section No.2 - Buildings
Bill No. 12
Plastering

R

<u>1:4 Cement plaster screeds wood floated on concrete</u>					
1	35mm Thick on floors and landings A : 42 E : 25	m ²	67		
<u>SCREEDS</u>					
<u>1:4 Cement plaster screeds steel floated on concrete</u>					
2	35mm Thick on floors and landings A : 149 E : 1	m ²	150		
<u>INTERNAL PLASTER</u>					
<u>Cement plaster on brickwork</u>					
3	On walls A : 152 E : 78	m ²	230		
4	On narrow widths A : 10 E : 3	m ²	13		
Carried to Abstract					
Section No.2 - Buildings Bill No. 12 Plastering				R	

[illegible]

Excavations

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

Laying, backfilling, bedding, etc. of pipes

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

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

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

Compacting

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

uPVC pipes and fittings:

Soil, waste and vent pipes and fittings shall be solvent weld jointed

uPVC pressure pipes and fittings:

Pipes for water supply shall be of the class stated

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

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

Carried to Abstract

Section No.2 - Buildings
Bill No. 13
Plumbing and drainage

R

Copper pipes:

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

Fixing of pipes

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

Reducing fittings

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

Exposed concrete surfaces

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

Excavations

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

"Soft rock" and "hard rock" shall be as defined in "Earthworks"

Carried to Abstract

Section No.2 - Buildings
Bill No. 13
Plumbing and drainage

R

Laying, backfilling, bedding, etc. of pipes

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

Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium-pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with 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

Flush pans

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

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

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

Waste unions

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

Key:

Location Description:

[A] 2 x Grade R Classroom
[E] 3 Grade R and 1 Teacher

RAINWATER DISPOSAL

"Marley Streamline" PVC gutters or similar approved

1	200 x 150mm Eaves gutters A : 48 E : 13	m	62
2	Extra over 200 x 150mm eaves gutter for angle A : 6 E : 2	No	8

Carried to Abstract

Section No.2 - Buildings
Bill No. 13
Plumbing and drainage

R

3	Extra over 200 x 150mm eaves gutter for outlet for 125mm pipe A : 6 E : 2	No	8		
4	125mm Diameter rainwater pipes A : 14 E : 5	m	18		
5	Extra over 125mm diameter rainwater pipe for shoe A : 6 E : 2	No	8		
6	Extra over 125mm diameter rainwater pipe for bend A : 6 E : 2	No	8		
7	Extra over 125mm diameter rainwater pipe for eaves or plinth offset 600mm projection A : 6 E : 2	No	8		
<u>SANITARY FITTINGS</u>					
<u>"Plumbcrazy" Grade 304 stainless steel</u>					
8	"DEB Code 304-11A" Double bowl sink and drainer 1 350 x 535mm wide including fixing complete to walls with (Code 7880) mild steel brackets bolted with expansion bolts A : 2 E : 0	No	2		
<u>Manufactured by "CHARLOG" or similar approved</u>					
9	"Christy" or similar approved plastic wash hand basin on brackets fixed to brickwall. A : 0 E : 5	No	5		
10	"ATLAS" VIP 200 Code 222 AP C/W or similar approved WC suite comprising WC pan with double flap heavy duty plastic seat A : 0 E : 5	No	5		
<u>WASTE UNIONS, ETC</u>					
<u>"Cobra Watertech"</u>					
11	32mm "301CP" Basin waste union A : 0 E : 5	No	5		
12	40mm "316CP" Bath or sink waste union A : 2 E : 0	No	2		
Carried to Abstract				R	
Section No.2 - Buildings Bill No. 13 Plumbing and drainage					

<u>TRAPS, ETC</u>					
<u>"Marley"</u>					
13	32 x 50mm Deep seal "P" or "S" trap A : 2 E : 5	No	7		
<u>TAPS, VALVES, ETC</u>					
<u>Brass</u>					
14	15mm Fullway gate valve A : 4 E : 5	No	9		
<u>"Cobra Watertech"</u>					
15	15mm 059CP Extension piece with sliding wall flange A : 2 E : 0	No	2		
16	15mm "166/041CP Carina" wall type sink mixer A : 2 E : 0	No	2		
17	15mm "111CP" Pillartap A : 0 E : 5	No	5		
<u>SANITARY PLUMBING</u>					
<u>uPVC pipes</u>					
18	50mm Pipes A : 10 E : 5	m	15		
19	110mm Vent pipes fixed to brickwork A : 0 E : 5	m	5		
<u>Extra over uPVC pipes for fittings</u>					
20	50mm Bend A : 4 E : 5	No	9		
21	50mm "GI Two-way" vent valve A : 2 E : 5	No	7		
<u>WATER SUPPLIES</u>					
<u>Class 0 copper pipes</u>					
22	15mm Pipes A : 20 E : 50	m	70		
Carried to Abstract				R	
Section No.2 - Buildings Bill No. 13 Plumbing and drainage					

<u>Extra over class 0 copper pipes for capillary fittings</u>					
23	15mm Fittings A : 8 E : 12	No	20		
<u>Copper overflow and service pipes</u>					
24	15mm Service pipe 500mm girth A : 2 E : 0	No	2		
<u>ELECTRIC WATER HEATERS</u>					
<u>"Kwikot"</u>					
25	150 Litre horizontal electric water heater in roof including standard galvanised sheet iron drip tray with overflow pipe to external wall A : 1 E : 0	No	1		
<u>TESTING</u>					
26	Testing water pipe system		Item		
<u>FIRE APPLIANCES ETC</u>					
<u>"Chubb"</u>					
27	4,5kg Carbon dioxide fire extinguisher complete with 520 x 115 x 22mm thick timber backboard plugged to wall and varnished A : 2 E : 0	No	2		
<u>AS-BUILT DRAWINGS</u>					
28	Provision of as-built drawings		Item		
Carried to Abstract					
Section No.2 - Buildings Bill No. 13 Plumbing and drainage				R	

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2	<p><u>6mm Silvered float glass ("GG" Quality) copper backed mirrors with rounded polished edges holed for and fixed on 6mm hardboard backing with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete</u></p> <p>Mirror 400 x 600mm high with four screws A : 0 E : 5</p>	No	5		
	<p>Section No.2 - Buildings Bill No. 14 Glazing</p>	Carried to Abstract		R	

[illegible]

ON PLASTERBOARD

One coat primer and two coats interior quality PVA emulsion paint

2	On ceilings and cornices	m ²	190		
	A : 190 E : 0				

ON FIBRE-CEMENT

One coat primer and two coats interior quality acrylic PVA paint

3	On internal window sills not exceeding 300mm wide or girth	m	26		
	A : 23 E : 3				

One coat primer and two coats exterior quality PVA emulsion paint

4	On fascias and barge boards	m ²	29		
	A : 22 E : 7				

ON METAL

Spot priming defects in pre primed surfaces with zinc chromate primer and applying one undercoat and two coat high gloss enamel paint on steel

5	On door frames	m ²	16		
	A : 7 E : 9				
6	On windows with burglar bars	m ²	23		
	A : 22 E : 2				
7	On rails, bars, pipes, etc not exceeding 300 mm girth	m	81		
	A : 62 E : 19				

ON WOOD

Three coats polyurethane semi-gloss varnish

8	On doors	m ²	38		
	A : 14 E : 24				
9	On skirtings, rails, etc not exceeding 300mm girth	m	90		
	A : 92 E : -2				

Carried to Abstract

Section No.2 - Buildings
Bill No. 15
Paintwork

R

[illegible]

Filling (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 to the re-use thereof as "filling"

All filling obtained from a commercial source should comply to minimum G6 standard

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

Filling in general shall be compacted to the prescribed percentage Mod AASHTO density

CBR and indicator tests

Density tests for monitoring filling shall be done at the minimum prescribed frequencies per each 150mm thick layer of filling placed

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

Results of these tests are to be submitted to and approved by the Principal Agent prior to commencement of any placement thereof and/or filling done therewith

Density tests

It will be required from the Contractor to execute density tests for monitoring filling at the following minimum frequencies per each filling layer placed:

- **Filling to form building platforms, etc:**
1 Test per 200m² plan area per each 150mm thick layer

Carried to Abstract

Section No.3 - General Site Works
Bill No. 1
External work

R

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

Keeping excavations free from water:

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

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

Carting away of excessive and/or unsuitable excavated material

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

The location of the intended dumping site will be subjected to the prior written approval of the Principal Agent

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

Tendered rates must make provision for the above-mentioned as no additional claims in this regard will afterwards be entertained

Carried to Abstract

Section No.3 - General Site Works
Bill No. 1
External work

R

Relevant SANS 1200 Specifications

The following relevant SANS 1200 Specifications shall be regarded applicable:

- Earth mattresses, building platforms, etc:

SANS 1200 AA	General (Small Works)
SANS 1200 C	Site clearance
SANS 1200 DE	Earthworks (Small works)
SANS 1200 ME	Sub-base
SANS 1200 MF	Base

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

SANS 1200 Specification (General)

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

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

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

Measurement and payment

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

EARTHWORKS

GENERAL SITE CLEARANCE ETC

Carried to Abstract

Section No.3 - General Site Works
Bill No. 1
External work

R

<u>Site clearance</u>					
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m ²	584		
2	Stripping average 150mm thick layer of top soil and stockpiling on site	m ²	584		
<u>BULK EXCAVATION, FILLING, ETC</u>					
<u>Open face excavation over sloping site</u>					
3	Open face excavation to form platforms and embankments and stockpiling on site	m ³	297		
<u>Extra over bulk excavation in earth for excavation in</u>					
4	Soft rock	m ³	29		
5	Hard rock	m ³	15		
<u>Extra over all excavations for carting away</u>					
6	Extra over all excavations for carting away surplus material from excavations and/or stockpile on site to a dumping site to be located by the contractor	m ³	283		
<u>Keeping excavations free of water</u>					
7	Keeping excavations free of all water other than subterranean water		Item		
<u>FILLING</u>					
<u>Earth filling obtained from the excavations including haulage approximately 800m from perimeter of excavations (not compacted)</u>					
8	In prescribed stock piles on site	m ³	88		
<u>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</u>					
9	Sub-base to from platforms and embankments	m ³	292		
Carried to Abstract				R	
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STORMWATER DRAINAGE

(HAYLETT FORMULA WORK GROUP No. 146)

Mass concrete with a coarse aggregate of 19mm and a minimum compressive strength of 20MPa at 28 days

10	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	94
11	Extra over for fair stopped end	No	2
12	Extra over for T-intersection	No	2

SOIL DRAINAGE

uPVC Class 6 pipes as drain pipes with couplings

13	110mm Pipes	m	15
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WATER SUPPLY

Excavation in earth not exceeding 2m deep

14	Trenches	m ³	2
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Extra over all excavations for carting away

15	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor	m ³	2
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Risk of collapse of excavations

16	Sides of trench and hole excavations not exceeding 1,5m deep	m ²	11
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G7 filling obtained from excavations compacted to 95% Mod AASHTO density

17	Under floors, steps, pavings, etc	m ³	3
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Section No.3 - General Site Works
Bill No. 1
External work

R

	<u>Water storage tanks shall carry a minimum 8 year manufacturer guarantee, which certificate shall be handed over to the Client upon practical completion</u>				
18	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		
	<u>SOIL POISONING</u>				
	<u>Soil insecticide</u>				
19	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m ²	8		
20	To bottoms and sides of trenches	m ²	20		
	<u>25MPa/19mm Unreinforced concrete cast against excavated surfaces</u>				
21	Strip footings	m ³	1		
	<u>REINFORCED CONCRETE</u>				
	<u>25MPa/19mm concrete</u>				
22	Surface beds on waterproofing	m ³	2		
	<u>TEST BLOCKS</u>				
23	Making and testing 150 x 150 x 150mm concrete strenght test cube (Provisional)	No	5		
	<u>CONCRETE SUNDRIES</u>				
	<u>Finishing top surfaces of concrete smooth with a wood float</u>				
24	Aprons, slabs, etc to falls	m ²	8		
Carried to Abstract				R	
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Bill No. 1					
External work					

	<u>Fabric reinforcement</u>				
25	Type 193 fabric reinforcement in concrete surface beds, slabs, etc	m ²	8		
	<u>WATERPROOFING</u>				
	<u>DAMP-PROOFING OF WALLS AND FLOORS</u>				
	<u>One layer of 250 micron "Consol Plastics Gunplas USB Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>				
26	Under surface beds (CPAP formula work group no. 116)	m ²	8		
	<u>Brickwork of NFP bricks in class II mortar</u>				
27	One brick walls	m ²	10		
	<u>Brickwork reinforcement</u>				
28	150mm Wide reinforcement built in horizontally "COROBRICK" firelight satin face bricks pointed with recessed horizontal and vertical joints	m	26		
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	m ²	7		
30	Coping on top of one brick wall	m	12		
	<u>WATER SUPPLY</u>				
	<u>Disinfecting</u>				
31	Disinfecting water pipe and tank system		Item		
	<u>HDPE polyethelene Class 12 piping with 'Plasson' or other approved fittings</u>				
32	32mm pipe and excavations not exceeding 1m deep	m	20		
	Carried to Abstract			R	
	Section No.3 - General Site Works				
	Bill No. 1				
	External work				

<u>SUNDRIES</u>				
33	50mm Diameter irrigation connection point including manhole box and cover <u>Water storage tanks shall carry a minimum 8 year manufacturer guarantee, which certificate shall be handed over to the Client upon practical completion</u>	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 <u>TESTING</u>	No	1	
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 <u>PERIMETER FENCING</u> <u>Clearing fence line</u>		Item	
36	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc <u>High Security metal fencing</u> <u>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</u>	m ²	207	
Carried to Abstract				
Section No.3 - General Site Works Bill No. 1 External work				R

Barbed wire fencing, gates, etc including two coats aluminium paint on metal stays, framing, etc

- 37 Fencing formed of I section standards 1800mm long at maximum 60m centres driven into ground and with droppers 1800m long at maximum 30m centres and 0.6mm strands of galvanised barbed wire tied to standards, posts and eye bolts

m 103

Gates

- 38 Gate 1000 x 1800mm high filled in with galvanised barbed wire

No 1

- 39 Double vehicular gate and frame 6 000 x 1 800mm 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 800mm 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

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External work

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Bill No. 2
External Walkways

Amount
R

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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

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

Filling in general shall be compacted to the prescribed percentage Mod AASHTO density

Filling in sub-layers, under floors, etc

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

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

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

Density tests

Density tests for monitoring filling shall be done at the minimum prescribed frequencies per each 150mm thick layer of filling placed

It will be required from the contractor to execute density tests for monitoring filling at the following minimum frequencies per each filling layer placed:

- *Filling under surface beds, aprons, channels, etc:*
1 Test per 125m² plan area per each 150mm thick layer

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Section No.3 - General Site Works
Bill No. 2
External Walkways

R

- *Filling behind retaining walls:*
1 Tests per each 10m length of retaining wall
- 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
- Carting away excessive and/or unsuitable excavated material**
- 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
- The location of the intended dumping site will be subjected to the prior written approval of the principal agent
- 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
- Tendered rates must make provision for the above-mentioned as no additional claims in this regard will afterwards be entertained
- Soil poisoning and insecticide**
- 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

Carried to Abstract

Section No.3 - General Site Works
Bill No. 2
External Walkways

R

Pest control applicators must provide :

1. Proof of pesticides and insecticides (data sheets)
2. Toxicants must be registered with the Department of Agriculture
2. Proof that they are qualified to perform the work
3. Five year guarantee certificate

SITE CLEARANCE

Site clearance

- | | | | |
|---|--|----------------|-----|
| 1 | Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth | m ² | 187 |
|---|--|----------------|-----|

EXCAVATION, FILLING, ETC

Excavation in earth not exceeding 2m deep

- | | | | |
|---|-----------------------------|----------------|----|
| 2 | Reduced levels under floors | m ³ | 17 |
| 3 | Trenches | m ³ | 74 |

Extra over bulk excavation in earth for excavation in

- | | | | |
|---|-----------|----------------|---|
| 4 | Soft rock | m ³ | 1 |
| 5 | Hard rock | m ³ | 1 |

Extra over all excavations for carting away

- | | | | |
|---|--|----------------|----|
| 6 | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor | m ³ | 43 |
|---|--|----------------|----|

Risk of collapse of excavations

- | | | | |
|---|--|----------------|-----|
| 7 | Sides of trench and hole excavations not exceeding 1,5m deep | m ² | 211 |
|---|--|----------------|-----|

Keep excavations free from water

- | | | | |
|---|---|------|--|
| 8 | Keeping excavations free of all water other than subterranean water | Item | |
|---|---|------|--|

FILLING ETC

Carried to Abstract

Section No.3 - General Site Works
Bill No. 2
External Walkways

R

	<u>G5 filling obtained from excavations compacted to 95% Mod AASHTO density</u>			
9	Backfilling to trenches, holes, etc	m ³	24	
	<u>SOIL POISONING</u>			
	<u>Soil insecticide</u>			
10	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m ²	297	
11	To bottoms and sides of trenches	m ²	121	
	<u>TESTS</u>			
	<u>Prescribed tests to determine degree of compaction or other properties of ground or filling</u>			
12	"Modified AASHTO Density" test	No	5	
	<u>CONCRETE</u>			
	<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>			
13	Strip footings	m ³	28	
	<u>REINFORCED CONCRETE</u>			
	<u>25MPa/19mm concrete</u>			
14	100mm Surface beds on waterproofing	m ³	17	
	<u>Fabric reinforcement</u>			
15	Type 193 fabric reinforcement in concrete surface beds, slabs, etc	m ²	174	
	<u>DAMP-PROOFING OF WALLS AND FLOORS</u>			
	<u>One layer of 250 micron "Consol Plastics Gunplas USB Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u>			
16	Under surface beds	m ²	174	
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	Section No.3 - General Site Works			
	Bill No. 2			
	External Walkways			

<u>FOUNDATIONS (PROVISIONAL)</u>					
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar</u>					
17	One brick walls	m ²	135		
<u>Brickwork reinforcement</u>					
18	150mm Wide reinforcement built in horizontally	m	351		
<u>"COROBRICK" Rainbow Light face bricks pointed with recessed horizontal and vertical joints</u>					
19	Extra over brickwork for face brickwork	m ²	60		
<u>Brick-on-edge header course copings, sills, etc of "COROBRICK" Rainbow Light face bricks, pointed with recessed joints on all exposed faces</u>					
20	Brick coping to top of plinth	m	176		
<u>METALWORK</u>					
<u>Welded frames to concrete walkways</u>					
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	14		
22	25 x 25 x 3mm Angle purlin bolted to frame	m	17		
23	8mm Expansion bolt and nuts	No	8		
24	10mm Expansion anchor with loose bolt	No	8		
<u>PROFILED METAL SHEETING AND ACCESSORIES</u>					
<u>0.5mm Gavanized IBR profile steel sheeting or similar approved complete</u>					
25	Roof covering with pitch not exceeding 5 degrees	m ²	37		
<u>ON METAL</u>					
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Section No.3 - General Site Works					
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External Walkways					

26	<p><u>Spot priming defects in pre primed surfaces with zinc chromate primer and applying one undercoat and two coat high gloss enamel paint on steel</u></p> <p>On rails, bars, pipes, etc not exceeding 300 mm girth</p>	m	36		
	<p>Section No.3 - General Site Works Bill No. 2 External Walkways</p>			R	

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BILL NO.1

PROVISIONAL SUMS

General

Principal building contract and deducted in whole or in part if not required without any compensation for loss of profit on the said allowances

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

Profit

Where stated, the contractor may allow for profit if required

General attendance on nominated/selected subcontractors

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

Carried to Abstract

Section No.4 - Provisional Sums
Bill No. 1
PC Amounts and Provisional Sums

R

Special attendance on nominated/selected subcontractors

Where "special attendance" such as unloading, storing, placing in position, providing special power supplies, specific hoisting, crange 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

Builder's work

Builder's work in connection with specialist services is given elsewhere in these bills of quantities

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;

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Section No.4 - Provisional Sums
Bill No. 1
PC Amounts and Provisional Sums

R

- 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) temporary 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.

Carried to Abstract

Section No.4 - Provisional Sums
Bill No. 1
PC Amounts and Provisional Sums

R

**ELECTRICAL, ELECTRONICAL AND MECHANICAL
INSTALLATIONS**

ELECTRICAL INSTALLATION

Electrical Installation:

1	Provide the amount of R200 000.00(Two Hundred Thousand Rands) for Electrical Installation	Item	200 000.00
2	Add for Profit on above item	Item	
3	Add for Attendance on above item	Item	

COMMUNITY LIAISON OFFICER

4	Provide the amount of R80 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)	Item	
5	Add for Profit on above item	Item	
6	Add for Attendance on above item	Item	

BUDGETARY ALLOWANCE

DRINKING FOUNTAINS

7	Allow the amount R21 000.00 (Twenty One Thousand Rands) for installations of Six drinking fountains	Item	
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Section No.4 - Provisional Sums
Bill No. 1
PC Amounts and Provisional Sums

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2 Section No.2 - Buildings	122	
3 Section No.3 - General Site Works	142	
4 Section No.4 - Provisional Sums	147	
Subtotal		R
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.		R
Sub Total		R
ADD: Value added Tax at 15%		R
TOTAL CARRIED TO FORM OF TENDER		R