



**University of Venda**  
*Creating Future Leaders*

**KCMQS PROJECT NO. N984**

**New Additions and Alterations to the Existing Nursing Science  
Simulation Building at the University of Venda, Thohoyandou, Limpopo  
Province  
(CIDB GRADING NO: 5GB)  
VOLUME 2 OF 2**

**PROCUREMENT DOCUMENT**

(Based on NEC3 Engineering and Construction Contract)

Date of Issue: 11 August 2021

**Issued by:**

Director Facilities Management

**University of the Venda, Thohoyandou**

**Name of tenderer:** .....

**Telephone Number:** .....

**Email Address:** .....

**Fax Number:** .....

**Cellphone Number:** .....

**Closing date: AS PER TENDER INVITATION**

**PREAMBLES FOR TRADE**

**PREAMBLES FOR TRADES**

**1. MODEL PREAMBLES FOR TRADES**

The "Specification of Materials and Methods to be used - PW371" as issued by the Department of Public Works shall apply and shall be deemed to be incorporated herein.

The Bidders are referred to the above-mentioned document for the full description of materials to be used and work to be executed.

A copy of the above-mentioned document is available at the offices of the Principal Agent for inspection.

**2. VARIATIONS AND/OR ADDITIONS TO MODEL PREAMBLES FOR TRADES**

2.1 All work to be done in accordance to the detailed specification as per the Engineers and Architects drawings.

2.2 Where variations and/or additions to Model Preambles differ from Clauses contained in the "Specification of Materials and Methods to be used - PW371", the variations and/or additions to Preambles shall take precedence.

**3. MATERIALS AND WORKMANSHIP**

Materials and workmanship shall be the best of their respective kinds. Only undamaged materials may be used in the works. Work shall be to the satisfaction of the Architect/Engineer and shall be executed in accordance with good building practice and the relevant Manufacturer's instruction. Where the term "approved" is used in connection with materials and workmanship, it shall mean that such materials shall be to the approval, instructions or choice of the Architect.

**4. STANDARD SPECIFICATIONS**

Materials and Workmanship shall comply with the Standard Building Regulations (SBR), National Building Regulations (NBR), SABS1200, the specifications and codes of practice of the South African Bureau of Standards, and CSIR recommendations. In cases of variance, these "Specification of Materials and Methods to be used - PW371" and any supplementary preambles thereto shall have precedence over the above-mentioned regulations, specifications and codes of practice. In cases of variance between the SBR and NBR, the NBR shall have precedence.

The latest issues of the above-mentioned regulations, specifications and codes of practice, as well as those of any other specifying body, to which reference is made, shall be applicable.

References to standard specifications and/or building regulations in these "Specification of Materials and Methods to be used - PW371" are for the information of the Contractor and shall in no way relieve him of his obligations under the Contract.

# **SECTION 1: PRELIMINARIES**

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Item  
No

**SECTION 1**

**BILL NO. 1**

**PRELIMINARIES**

**PRELIMINARIES**

- i) The NEC3 Engineering and Construction Contract Option B: Priced contract with bill of quantities (Third edition of June 2005) in conjunction with the Contract Data is taken to be incorporated herein
- ii) The tenderer is deemed to have taken cognizance of the above mentioned documents for the full intent and meaning of each clause. These clauses are referred to by clause number and heading only
- iii) The amount of Preliminaries to be included in each monthly payment certificate shall be assessed as an amount prorated to the value of the work duly executed in the same ratio as the preliminaries bears to the total of prices excluding any contingency sum and the amount for Preliminaries
- iv) Where the initial contract period is extended, the monthly charge shall be calculated on the basis as set out in (iii) but taking into account the revised period for completing the works

Quantity

Rate

Amount

**Carried to Collection**

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v) The amount or the items of the Preliminaries are adjusted to take account of the theoretical financial effect which changes in time or value (or both) have on this section. Such adjustments shall be based on adjustments in the following categories as recorded in the Bills of Quantities:

- a) an amount which is not varied, namely fixed
- b) an amount which is varied in proportion to the contract value, namely value related; and
- c) an amount which is varied in proportional to the construction period as compared to the initial construction period excluding revisions to the construction period for which the contractor is not entitled to adjustment in terms of the contract, namely Time Related

Where no provision is made in Bills of Quantities to indicate which of the three categories in (v) apply or where no selection is made, the adjustments shall be based on the following breakdown:

- a) 10 percent is Fixed
- b) 15 percent is Value related
- c) 75 percent is Time Related

The adjustments of the Preliminaries shall apply not withstanding the actual employment of resources in the execution of the works. The contract value used for the adjustment of the Preliminaries shall exclude any contingency sum and the amount for Preliminaries

**SECTION A: CONDITIONS OF CONTRACT**

**CORE CLAUSES**

**GENERAL**

**Action (clause 10)**

Actions (clause 10.1)

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|   |               |      |   |
|---|---------------|------|---|
|   | Fixed Related | Item |   |
|   | Value Related | Item |   |
|   | Time Related  | Item |   |
| <b><u>Identified and defined terms (clause 11)</u></b>                              |               |      |   |
| Condition of contract (clause 11.1)   |               |      |   |
|   | Fixed Related | Item |   |
|   | Value Related | Item |   |
|   | Time Related  | Item |   |
| Defined terms (clause 11.2)   |               |      |   |
|   | Fixed Related | Item |   |
|   | Value Related | Item |   |
|   | Time Related  | Item |   |
| <b><u>Interpretation and the law (clause 12)</u></b>                                |               |      |   |
| Interpretation of the law (clause 12.1 - 12.4)                                      |               |      |   |
|   | Fixed Related | Item |   |
|   | Value Related | Item |   |
|   | Time Related  | Item |   |
| <b><u>Communication (clause 13)</u></b>   |               |      |   |
| Communication (clause 13.1 - 13.8)  |               |      |   |
| <b>Carried to Collection</b>  |               |      | R |
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|   |                              |      |   |
|---|------------------------------|------|---|
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>The Project Manager and the Supervisor (clause 14)</u></b>                    |                              |      |   |
| The Project Manager and the Supervisor (clause 14.1 - 14.4)                         |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>Adding to the Working Areas (clause 15)</u></b>                               |                              |      |   |
| Adding to the Working Areas (clause 15.1)   |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>Early Warning (clause 16)</u></b>   |                              |      |   |
| Early Warning (clause 16.1 - 16.4)  |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
|   | <b>Carried to Collection</b> |      | R |
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**Ambiguities and inconsistencies (clause 17)**

Ambiguities and inconsistencies (clause 17.1)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Illegal and impossible requirements (clause 18)**

Illegal and impossible requirements (clause 18.1)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Prevention (clause 19)**

Prevention (clause 19.1))

Fixed Related

Item

Value Related

Item

Time Related

Item

**THE CONTRACTOR'S MAIN  
RESPONSIBILITIES**

**Providing the Works (clause 20)**

Providing the Works (clause 20.1)

**Carried to Collection**

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|   |                              |      |   |  |
|---|------------------------------|------|---|--|
|   | Fixed Related                | Item |   |  |
|   | Value Related                | Item |   |  |
|   | Time Related                 | Item |   |  |
| <b><u>The Contractor's design (clause 21)</u></b>                                   |                              |      |   |  |
| The contractor's design (clause 21.1 - 21.3)  |                              |      |   |  |
|   | Fixed Related                | Item |   |  |
|   | Value Related                | Item |   |  |
|   | Time Related                 | Item |   |  |
| <b><u>Using the Contractor's design (clause 22)</u></b>                             |                              |      |   |  |
| Using the Contractor's design (clause 22.1)   |                              |      |   |  |
|   | Fixed Related                | Item |   |  |
|   | Value Related                | Item |   |  |
|   | Time Related                 | Item |   |  |
| <b><u>Design of Equipment (clause 23)</u></b>                                       |                              |      |   |  |
| Design of Equipment (clause 23.1)   |                              |      |   |  |
|   | Fixed Related                | Item |   |  |
|   | Value Related                | Item |   |  |
|   | Time Related                 | Item |   |  |
|   | <b>Carried to Collection</b> |      | R |  |
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**People (clause 24)**

People (clause 24.1 - 24.2)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Working with the Employer and Others (clause 25)**

Working with the Employer and Others (clause 25.1 - 25.3)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Sub-contracting (clause 26)**

Sub-contracting (clause 26.1 - 26.3)

Fixed Related

Item

Value Related

Item

Time Related

Item

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**Other responsibilities (clause 27)**

Other responsibilities (clause 27.1 - 27.4)

Fixed Related

Item

Value Related

Item

Time Related

Item

**TIME**

**Starting, Completion and Key dates (clause 30)**

Starting date (clause 30.1)

Fixed Related

Item

Value Related

Item

Time Related

Item

Completion date (clause 30.2)

Fixed Related

Item

Value Related

Item

Time Related

Item

Key date (clause 30.3)

Fixed Related

Item

Value Related

Item

Time Related

Item

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**The Programme (clause 31)**

The Programme (clause 31.1 - 31.3)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Revising the programme (clause 32)**

Revising the programme (clause 32.1 - 32.2)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Access to and use of the Site (clause 33)**

Access to and use of the Site (clause 33.1)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Instruction to stop or not to start work (clause 34)**

Instruction to stop or not to start work (clause 34.1)

Fixed Related

Item

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|   |                              |      |   |
|---|------------------------------|------|---|
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>Take over (clause 35)</u></b>   |                              |      |   |
| Take over (clause 35.1 - 35.3)  |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>Acceleration (clause 36)</u></b>  |                              |      |   |
| Acceleration (clause 36.1 - 36.3)   |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>TESTING AND DEFECTS</u></b>   |                              |      |   |
| <b><u>Testing and inspections (clause 40)</u></b>                                   |                              |      |   |
| Testing and inspections (clause 40.1 - 40.6)  |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
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**Testing and inspections before delivery (Clause 41)**

Testing and inspection before delivery (clause 41.1)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Searching for and notifying Defects (Clause 42)**

Searching for and notifying Defects (Clause 42.1 - 42.2)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Correcting Defects (Clause 43)**

Correcting Defects (Clause 43.1 - 43.4)

Fixed Related

Item

Value Related

Item

Time Related

Item

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**Accepting Defects (clause 44)**

Accepting Defects (clause 44.1 - 44.2)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Uncorrected Defects (clause 45)**

Uncorrected Defects (clause 45.1 - 45.2)

Fixed Related

Item

Value Related

Item

Time Related

Item

**PAYMENT**

**Assessing the amount due (clause 50)**

Assessing the amount due (clause 50.1 - 50.5)

Fixed Related

Item

Value Related

Item

Time Related

Item

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**Payment (clause 51)**

Payment (clause 51.1 - 51.4)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Defined Cost (clause 52)**

Defined Cost (clause 52.1)

Fixed Related

Item

Value Related

Item

Time Related

Item

**The Bills of Quantities (clause 55)**

The bills of quantities (clause 55.1)

Fixed Related

Item

Value Related

Item

Time Related

Item

**COMPENSATION EVENTS**

**Carried to Collection**

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**Compensation events (clause 60)**

Compensation events (clause 60.1 - 60.7)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Notifying compensation events (clause 61)**

Notifying compensation events (clause 61.1 - 61.7)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Quotation for compensation events (clause 62)**

Quotation for compensation events (clause 62.1 - 62.6)

Fixed Related

Item

Value Related

Item

Time Related

Item

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**Assessing compensation events (clause 63)**

Assessing compensation events (clause 63.1 - 63.13)

Fixed Related

Item

Value Related

Item

Time Related

Item

**The Project Manager's assessment (clause 64)**

The Project Manager's assessment (clause 64.1 - 64.4)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Implementing compensation events (clause 65)**

Implementing compensation events (clause 65.1 - 65.4)

Fixed Related

Item

Value Related

Item

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| <b><u>TITLE</u></b>  | Time Related  |                              | Item |   |
|--|---------------|------------------------------|------|---|
| <b><u>The Employer's title to Plant and Materials (clause 70)</u></b>                  |               |                              |      |   |
| Plant and Materials outside the working area (clause 70.1)                             |               |                              |      |   |
|  | Fixed Related |                              | Item |   |
|  | Value Related |                              | Item |   |
|  | Time Related  |                              | Item |   |
| Plant and Materials within the working area (clause 70.2)                              |               |                              |      |   |
|  | Fixed Related |                              | Item |   |
|  | Value Related |                              | Item |   |
|  | Time Related  |                              | Item |   |
| <b><u>Marking Equipment, Plant and Materials outside Working Areas (clause 71)</u></b> |               |                              |      |   |
| Marking Equipment, Plant and Materials outside Working Areas (clause 71.1)             |               |                              |      |   |
|  |               | <b>Carried to Collection</b> |      | R |
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|   |                              |      |   |
|---|------------------------------|------|---|
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>Removing Equipment (clause 72)</u></b>  |                              |      |   |
| Removing Equipment (clause 72.1)  |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>Objects and materials within the site (clause 73)</u></b>                     |                              |      |   |
| Objects and materials within the site (clause 73.1 - 73.2)                          |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>RISK AND INSURANCE</u></b>  |                              |      |   |
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**Employer's risk (clause 80)**

Employer's risk (clause 80.1)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Contractor's risk (clause 81)**

Contractor's risk (clause 81.1)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Repairs (clause 82)**

Repairs (clause 82.1)

Fixed Related

Item

Value Related

Item

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|  |                       |      |   |  |
|--|-----------------------|------|---|--|
|  | Time Related          | Item |   |  |
| <b><u>Indemnity (clause 83)</u></b>          |                       |      |   |  |
| Indemnity (clause 83.1- 83.2)                |                       |      |   |  |
|  | Fixed Related         | Item |   |  |
|  | Value Related         | Item |   |  |
|  | Time Related          | Item |   |  |
| <b><u>Insurance cover (clause 84)</u></b>    |                       |      |   |  |
| Insurance cover (clause 84.1 - 84.2)         |                       |      |   |  |
|  | Fixed Related         | Item |   |  |
|  | Value Related         | Item |   |  |
|  | Time Related          | Item |   |  |
| <b><u>Insurance policies (clause 85)</u></b> |                       |      |   |  |
| Insurance policies (clause 85.1 - 85.4)      |                       |      |   |  |
|  | Fixed Related         | Item |   |  |
|  | Value Related         | Item |   |  |
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|  |             |                                      |
|--|-------------|--------------------------------------|
| <p style="text-align: right;">Time Related</p> <p><b><u>If the Contractor does not insure (clause 86)</u></b></p> <p>If the Contractor does not insure (clause 86.1)</p> | <p>Item</p> |                                      |
|  |             |                                      |
| <p style="text-align: right;">Fixed Related</p>  | <p>Item</p> |                                      |
| <p style="text-align: right;">Value Related</p>  | <p>Item</p> |                                      |
| <p style="text-align: right;">Time Related</p>   | <p>Item</p> |                                      |
|  |             |                                      |
| <p><b><u>Insurance by the Employer (clause 87)</u></b></p>   |             |                                      |
| <p>Insurance by the Employer (clause 87.1 -87.3)</p>   |             |                                      |
|  |             |                                      |
| <p style="text-align: right;">Fixed Related</p>  | <p>Item</p> |                                      |
| <p style="text-align: right;">Value Related</p>  | <p>Item</p> |                                      |
| <p style="text-align: right;">Time Related</p>   | <p>Item</p> |                                      |
|  |             |                                      |
|  |             |                                      |
|  |             |                                      |
| <p><b><u>TERMINATION</u></b></p>   |             |                                      |
|  |             |                                      |
|  |             |                                      |
|  |             |                                      |
|  |             |                                      |
|  |             |                                      |
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|  |             |                                      |
|  |             |                                      |
|  |             |                                      |
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**Termination (clause 90)**

Termination (clause 90.1 - 90.5)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Reasons for termination (clause 91)**

Reasons for termination (clause 91.1 - 91.7)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Procedures on termination (clause 92)**

Procedures on termination (clause 92.1 - 92.2)

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|   |                              |      |   |
|---|------------------------------|------|---|
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>Payment on termination (clause 93)</u></b>                                    |                              |      |   |
| Procedures on termination (clause 93.1 - 93.2)                                      |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>MAIN OPTION CLAUSES</u></b>   |                              |      |   |
| <b><u>DISPUTE RESOLUTION</u></b>  |                              |      |   |
| <b><u>Option W1</u></b>   |                              |      |   |
| Dispute Resolution (clause W1.1)  |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| The Adjudicator (clause W1.2)   |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
|   | <b>Carried to Collection</b> |      | R |
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**NEW ADDITIONS AND ALTERATIONS  
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The Adjudication (clause W1.3)

Fixed Related

Item

Value Related

Item

Time Related

Item

Review by the Tribunal (clause W1.4)

Fixed Related

Item

Value Related

Item

Time Related

Item

**SECONDARY OPTION CLAUSES**

**Price adjustment for inflation (Option X1)**

Defined terms (clause X1.1)

Fixed Related

Item

Value Related

Item

Time Related

Item

Price Adjustment Factor (clause X1.2)

Fixed Related

Item

Value Related

Item

Time Related

Item

Compensation Event (clause X1.3)

Fixed Related

Item

Value Related

Item

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**NEW ADDITIONS AND ALTERATIONS  
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Price Adjustment (clause X1.4)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Changes in the law (Option X2)**

Changes in the law (clause X2.1)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Delay damages (Option X7)**

Delay damages (clause X7.1 - X7.3)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Performance bond (Option X13)**

Performance bond (Option X13.1)

Fixed Related

Item

Value Related

Item

Time Related

Item

**Advanced payment to the contractor (Option X14)**

Advanced payment to the contractor (Option X14.1 - X14.3)

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|   |                              |      |   |
|---|------------------------------|------|---|
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>Limitation of the Contractor's liability for his design to reasonable skill and care (Option X15)</u></b> |                              |      |   |
| Limitation of the Contractor's liability for his design to reasonable skill and care (Option X15.1 - X15.2)     |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>Retention (Option X16)</u></b>  |                              |      |   |
| Retention (Option X16.1 - X16.2)  |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
| <b><u>Low performance damages (Option X17)</u></b>  |                              |      |   |
| Low performance damages (Option X17.1)  |                              |      |   |
|   | Fixed Related                | Item |   |
|   | Value Related                | Item |   |
|   | Time Related                 | Item |   |
|   | <b>Carried to Collection</b> |      | R |
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**Limitation of Liability (Option X18)**

Limitation of Liability (Option X18.1 - X18.5)

Fixed Related

Item

Value Related

Item

Time Related

Item

**CONTRACT DATA**

Contractual Requirements as stated elsewhere in the document

**ESTABLISHMENT OF FACILITIES ON THE SITE**

**Facilities for Project Manager**

Furnished offices (In no 1)

Fixed Related

Item

Value Related

Item

Time Related

Item

Name boards (In no 1)

Fixed Related

Item

Value Related

Item

Time Related

Item

Offices and storage sheds

Fixed Related

Item

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|  | Time Related  |  | Item |   |
|--|---------------|--|------|---|
| <b><u>Facilities for the contractor</u></b>                                  |               |  |      |   |
| Living accommodation   |               |  |      |   |
|  | Fixed Related |  | Item |   |
|  | Value Related |  | Item |   |
|  | Time Related  |  | Item |   |
| Ablution and latrine facilities  |               |  |      |   |
|  | Fixed Related |  | Item |   |
|  | Value Related |  | Item |   |
|  | Time Related  |  | Item |   |
| Tools and Equipments   |               |  |      |   |
|  | Fixed Related |  | Item |   |
|  | Value Related |  | Item |   |
|  | Time Related  |  | Item |   |
| Water supplies, electric power, communication, dealing with water and access |               |  |      |   |
|  | Fixed Related |  | Item |   |
|  | Value Related |  | Item |   |
|  | Time Related  |  | Item |   |
| Other fixed charge obligations   |               |  |      |   |
|  | Fixed Related |  | Item |   |
|  | Value Related |  | Item |   |
|  | Time Related  |  | Item |   |
| <b>Carried to Collection</b>   |               |  |      |   |
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Removal of site establishment

Fixed Related

Item

Value Related

Item

Time Related

Item

**Occupational Health and safety**

Allow for compliance to Occupational Health and safety specifications including, OHS testing of personnel before commencement and after completion of project, safety equipment and safety officer.

Fixed Related

Item

Value Related

Item

Time Related

Item

Allow for compliance with all COVID 19 Regulations and Requirements

Fixed Related

Item

Value Related

Item

Time Related

Item

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## **SECTION 2: BUILDING WORKS**

**NEW ADDITIONS AND ALTERATIONS  
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**SECTION NO. 2**

**BILL NO. 1**

**FOUNDATIONS**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**SUPPLEMENTARY PREAMBLES**

Nature of ground

The nature of the ground is assumed to be sandy weathered granite, therefore "earth", but possibly interspersed with "hard rock"

Excavation for working space in rock

Notwithstanding clause 11 page 8 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as "extra over" bulk excavation or trench and hole excavation as the case may be

Carting away of excavated material

Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site

Filling

Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material

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Rate

Amount

R

**NEW ADDITIONS AND ALTERATIONS  
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**EARTHWORKS**

**EXCAVATIONS**

Excavation in earth not exceeding 2m deep

|   |          |    |     |
|---|----------|----|-----|
| 1 | Trenches | m3 | 175 |
|---|----------|----|-----|

|   |       |    |    |
|---|-------|----|----|
| 2 | Holes | m3 | 12 |
|---|-------|----|----|

Extra over trench and hole excavations in earth for excavation in

|   |           |    |   |
|---|-----------|----|---|
| 3 | Soft rock | m3 | 4 |
|---|-----------|----|---|

|   |           |    |   |
|---|-----------|----|---|
| 4 | Hard rock | m3 | 9 |
|---|-----------|----|---|

Extra over all excavations for carting away

|   |  |    |     |
|---|--|----|-----|
| 5 | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor | m3 | 107 |
|---|--|----|-----|

Risk of collapse of excavations

|   |  |    |     |
|---|--|----|-----|
| 6 | Sides of trench and hole excavations not exceeding 1,5m deep | m2 | 522 |
|---|--|----|-----|

Keeping excavations free of water

|   |                                   |  |      |
|---|-----------------------------------|--|------|
| 7 | Keeping excavations free of water |  | Item |
|---|-----------------------------------|--|------|

**FILLING ETC**

Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density

|   |                                     |    |    |
|---|-------------------------------------|----|----|
| 8 | Backfilling to trenches, holes, etc | m3 | 81 |
|---|-------------------------------------|----|----|

Earth filling of G7 material supplied by the contractor, compacted to 95% Mod AASHTO density

|   |                                   |    |     |
|---|-----------------------------------|----|-----|
| 9 | Under floors, steps, pavings, etc | m3 | 121 |
|---|-----------------------------------|----|-----|

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**NEW ADDITIONS AND ALTERATIONS  
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|   |  |        |
|---|--|--------|
| <u>Compaction of surfaces</u>   |  |        |
| 10  | Compaction of ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density | m2 545 |
| <u>Prescribed density tests on filling</u>  |  |        |
| 11  | "Mod. AASHTO Density" test   | No 25  |
| <b><u>SOIL POISONING</u></b>  |  |        |
| <u>Soil insecticide to be executed with SABS compliance by a firm of specialists under a 5 year guarantee</u> |  |        |
| 12  | Under floors etc, including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming   | m2 545 |
| 13  | To bottoms and sides of trenches etc   | m2 731 |
| <u>Weedkiller to be executed with SABS compliance by a firm of specialists under a 5 year guarantee</u>       |  |        |
| 14  | Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming  | m2 545 |
| 15  | To bottoms and sides of trenches etc   | m2 731 |
| <b><u>CONCRETE, FORMWORK &amp; REINFORCEMENT</u></b>  |  |        |
| <b><u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>   |  |        |
| <u>15MPa/19mm concrete</u>  |  |        |
| 16  | Surface blinding under footings and bases  | m3 10  |
| <b><u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>   |  |        |
| Carried to Collection   |  | R      |
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**NEW ADDITIONS AND ALTERATIONS  
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|    |  |    |      |   |
|----|--|----|------|---|
|    | <u>30MPa/19mm concrete</u>   |    |      |   |
| 17 | Strip footings   | m3 | 58   |   |
| 18 | Bases  | m3 | 4    |   |
|    | <b><u>REINFORCED CONCRETE</u></b>  |    |      |   |
|    | <u>30MPa/19mm concrete</u>   |    |      |   |
| 19 | Columns in foundations   | m3 | 0.2  |   |
| 20 | Walls in foundations   | m3 | 1    |   |
|    | <b><u>TEST CUBES</u></b>   |    |      |   |
| 21 | Allow for preparing a set of three (3) concrete strength test cubes, each size 150 x 150 x 150mm, sending them to an approved Testing Laboratory for testing and paying all charges in connection therewith. | No | 33   |   |
|    | <b><u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u></b>  |    |      |   |
|    | <u>Smooth formwork to sides</u>  |    |      |   |
| 22 | Walls in foundations   | m2 | 5    |   |
| 23 | Rectangular columns in foundations.  | m2 | 2    |   |
|    | <u>Special formwork to circular columns</u>  |    |      |   |
| 24 | 300mm Diameter column 0,895m high  | No | 1    |   |
|    | <b><u>REINFORCEMENT</u></b>  |    |      |   |
|    | <u>Mild steel reinforcement to structural concrete work</u>  |    |      |   |
| 25 | 8mm Diameter bars  | t  | 2.22 |   |
| 26 | 10mm Diameter bars   | t  | 0.23 |   |
|    | <b>Carried to Collection</b>   |    |      | R |
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|    |  |    |      |   |
|----|--|----|------|---|
|    | <u>High tensile steel reinforcement to structural concrete work</u>  |    |      |   |
| 27 | 10mm Diameter bars   | t  | 0.34 |   |
| 28 | 12mm Diameter bars   | t  | 2.57 |   |
| 29 | 16mm Diameter bars   | t  | 2.57 |   |
|    | <u>High tensile steel dowel bars</u>   |    |      |   |
| 30 | 16mm Diameter dowel bar 1000mm long with 500mm drilled into (and including drilling) into existing concrete and covered with wet dry epoxy a.b.e epidermix 396 or similar approved and the remaining 500mm length left to join with new concrete | No | 30   |   |
|    | <u>Sundries, etc.</u>  |    |      |   |
| 31 | Prepare and apply wet dry epoxy a.b.e epidermix 396 or similar approved on existing concrete surfaces  | m2 | 1    |   |
|    | <b><u>MASONRY</u></b>  |    |      |   |
|    | <u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar</u>  |    |      |   |
| 32 | Half brick walls   | m2 | 40   |   |
| 33 | One brick walls  | m2 | 173  |   |
| 34 | One and half brick walls   | m2 | 1    |   |
| 35 | 345mm Hollow walls of two half brick skins including vertical twist type wall ties   | m2 | 24   |   |
|    | <b><u>BRICKWORK SUNDRIES</u></b>   |    |      |   |
| 36 | Splayed mortar fillet one course high in 115mm cavity  | m  | 12   |   |
| 37 | Fill 115mm cavity of hollow walls with 1:3 cement mortar   | m3 | 1    |   |
|    | <b>Carried to Collection</b>   |    |      | R |
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|    |   |    |       |   |
|----|---|----|-------|---|
|    | <u>Brickwork reinforcement</u>  |    |       |   |
| 38 | 75mm Brick reinforcement built in horizontally  | m  | 1,049 |   |
| 39 | 150mm Wide reinforcement built in horizontally  | m  | 2,029 |   |
| 40 | 230mm Wide reinforcement built in horizontally  | m  | 11    |   |
|    | <u>Galvanised hoop iron cramps, ties, etc</u>   |    |       |   |
| 41 | 1,6mm Thick x 25mm wide galvanised metal hoop iron 540mm long three (3) times bent and built into brickwork   | No | 170   |   |
| 42 | 1,6mm Thick x 25mm wide galvanised metal hoop iron 450mm long two (2) times bent, with one end fixed to concrete column with and including 5mm Fisher plugs and screws and the other end built into brickwork   | No | 4     |   |
| 43 | 1,6mm Thick x 25mm wide galvanised metal hoop iron 540mm long two (2) times bent, with one end fixed to concrete column with and including "hilti" instructions and the other end built into brickwork  | No | 26    |   |
|    | <b><u>FACE BRICKWORK</u></b>  |    |       |   |
|    | <u>Face clay face brick, size 222 x 106 x 73mm, bedded and jointed in Class I mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zone 1-2 (PC Amount R10 000-00/1000 VAT excl. supplied and delivered to site)</u> |    |       |   |
| 44 | Extra over brickwork for face brickwork   | m2 | 60    |   |
|    | <u>Brick-on-edge header course copings, sills, etc of face bricks pointed with recessed joints on all exposed faces (PC Amount R10 000-00/1000 VAT excl. supplied and delivered to site)</u>  |    |       |   |
| 45 | Coping on top of one brick wall   | m  | 42    |   |
|    | <b><u>WATERPROOFING</u></b>   |    |       |   |
|    | <b>Carried to Collection</b>  |    |       | R |
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**NEW ADDITIONS AND ALTERATIONS  
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**DAMPPROOFING OF WALLS AND FLOORS**

Prepare brick surfaces, remove projecting mortar, leave smooth an apply two coats "a.b.e Construction Chemicals" flintkote 3 in strict accordance with manufacturer's instructions

|    |                              |    |     |
|----|------------------------------|----|-----|
| 46 | On foundation walls surfaces | m2 | 416 |
|----|------------------------------|----|-----|

**JOINT SEALANTS ETC**

"Sika"

|    |   |   |    |
|----|---|---|----|
| 47 | Prepare surfaces and apply 10 x 15mm deep "Sikaflex Pro 2HP" polyurethane sealant to joints | m | 87 |
|----|---|---|----|

"Sondor"

|    |  |   |    |
|----|--|---|----|
| 48 | Sondor Performance Foams Jointex low density (33kg/m <sup>3</sup> ), cross linked, closed cell, expanded polyethylene joint former, size 85 x 10mm thick with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation. | m | 18 |
|----|--|---|----|

|    |   |   |    |
|----|---|---|----|
| 49 | Sondor Performance Foams Jointex low density (33kg/m <sup>3</sup> ), cross linked, closed cell, expanded polyethylene joint former, size 200 x 10mm thick with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation. | m | 14 |
|----|---|---|----|

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|    |   |                |    |   |
|----|---|----------------|----|---|
| 50 | Sondor Performance Foams Jointex low density (33kg/m <sup>3</sup> ), cross linked, closed cell, expanded polyethylene joint former, size 315 x 10mm thick with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation. | m              | 7  |   |
| 51 | Sondor Performance Foams Jointex low density (33kg/m <sup>3</sup> ), cross linked, closed cell, expanded polyethylene joint former, size 270 x 10mm thick with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation. | m              | 4  |   |
|    | <u>Expansion joints with bitumen impregnated softboard between concrete and brickwork</u>   |                |    |   |
| 52 | 10mm Joints not exceeding 300mm high vertically between walls   | m              | 36 |   |
| 53 | 10mm Joints 345mm wide vertically between walls   | m              | 7  |   |
|    | <b><u>PAINTWORK</u></b>   |                |    |   |
|    | <b><u>ON METAL</u></b>  |                |    |   |
|    | <u>Prepare surfaces and apply two coats bitumen primer in strict accordance to manufacturer's instructions</u>  |                |    |   |
| 54 | On columns and beams  | m <sup>2</sup> | 2  |   |
| 55 | On rails, bars, pipes, etc not exceeding 300 mm girth   | m              | 1  |   |
|    | <b><u>PLASTERING</u></b>  |                |    |   |
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**NEW ADDITIONS AND ALTERATIONS  
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|    | <u>Non shrink grout</u>   |    |  |   |  |  |  |  |  |  |  |
|----|---|----|--|---|--|--|--|--|--|--|--|
| 56 | 25mm Thick bedding under 220 x 220mm wide base plate including chamfering edges all round | No |  | 2 |  |  |  |  |  |  |  |
| 57 | 25mm Thick bedding under 620 x 220mm wide base plate including chamfering edges all round | No |  | 1 |  |  |  |  |  |  |  |

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**SECTION NO. 2**

**BILL NO. 2**

**CONCRETE, FORMWORK AND  
REINFORCEMENT**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**SUPPLEMENTARY PREAMBLES**

Cost of tests

The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the architect. The testing shall be undertaken by an independent firm or institution nominated by the contractor and to the approval of the architect. (Test cubes are measured separately)

Breeze concrete

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

Quantity

Rate

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CONCRETE, FORMWORK & REINFORCEMENT

**NEW ADDITIONS AND ALTERATIONS  
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Formwork

Description 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

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

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

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

**LIGHTWEIGHT CONCRETE**

Breeze concrete

|   |                                 |    |     |
|---|---------------------------------|----|-----|
| 1 | Grading to slabs                | m2 | 110 |
| 2 | Grading to sides of beams, etc. | m2 | 24  |

**REINFORCED CONCRETE**

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|    |  |    |     |   |
|----|--|----|-----|---|
|    | <u>30MPa/19mm concrete</u>   |    |     |   |
| 3  | Surface beds cast in panels on waterproofing   | m3 | 54  |   |
| 4  | Extra over for concrete thickening in surface beds size 75mm deep, 800mm at top and tapering both sides to 600mm at bottom, including all excavations, cart away, etc.                                       | m  | 40  |   |
| 5  | Walls  | m3 | 3   |   |
| 6  | Columns  | m3 | 1   |   |
| 7  | Slabs including beams and inverted beams   | m3 | 33  |   |
| 8  | Isolated beams   | m3 | 2   |   |
|    | <b><u>TEST CUBES</u></b>   |    |     |   |
| 9  | Allow for preparing a set of three (3) concrete strength test cubes, each size 150 x 150 x 150mm, sending them to an approved Testing Laboratory for testing and paying all charges in connection therewith. | No | 50  |   |
|    | <b><u>CONCRETE SUNDRIES</u></b>  |    |     |   |
|    | <u>Finishing top surfaces of concrete smooth with a wood float/steel trowel</u>  |    |     |   |
| 10 | Ramps, etc   | m2 | 7   |   |
| 11 | Surface beds, slabs, etc   | m2 | 538 |   |
|    | <u>Finishing top surfaces of concrete smooth with a power float</u>  |    |     |   |
| 12 | Finishing smooth top and sides surfaces of grading to falls for waterproofing  | m2 | 134 |   |
|    | <b><u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u></b>  |    |     |   |
|    | <b>Carried to Collection</b>   |    |     | R |
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|    |   |    |     |
|----|---|----|-----|
|    | <u>Smooth formwork to sides</u>   |    |     |
| 13 | Walls   | m2 | 23  |
| 14 | Beams   | m2 | 28  |
| 15 | Isolated beams  | m2 | 16  |
| 16 | Inverted beams above concrete   | m2 | 24  |
| 17 | Rectangular column propped up exceeding 3,5m high and not exceeding 5m high                             | m2 | 9   |
|    | <u>Smooth formwork to soffits</u>   |    |     |
| 18 | Isolated beams  | m2 | 4   |
| 19 | Slabs exceeding 250mm and not exceeding 500mm thick propped up exceeding 3,5m and not exceeding 5m high | m2 | 110 |
|    | <u>Special formwork to circular columns</u>   |    |     |
| 20 | 300mm Diameter circular columns 3,40m high  | No | 1   |
|    | <u>Boxing in smooth formwork to form</u>  |    |     |
| 21 | 25 x 25mm chamfer along edge  | m  | 97  |
| 22 | 20mm Deep drip line groove at bottom of slabs   | m  | 55  |
|    | <b><u>MOVEMENT JOINTS ETC</u></b>   |    |     |
|    | <u>Expansion joints with bitumen impregnated softboard between concrete and brickwork</u>               |    |     |
| 23 | 10mm Joints not exceeding 300mm high along edges of surface beds  | m  | 381 |
|    | <u>Saw cut joints</u>   |    |     |
| 24 | 5 x 50mm Saw cut joints in top of concrete  | m  | 114 |

**REINFORCEMENT**

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|  |  |    |      |   |
|--|--|----|------|---|
| <u>Mild steel reinforcement to structural concrete work</u>                                  |  |    |      |   |
| 25   | 8mm Diameter bars  | t  | 1.61 |   |
| <u>High tensile steel reinforcement to structural concrete work</u>                          |  |    |      |   |
| 26   | 12mm Diameter bars   | t  | 1.38 |   |
| 27   | 16mm Diameter bars   | t  | 1.38 |   |
| <u>Fabric reinforcement</u>  |  |    |      |   |
| 28   | Steeledale Mesh standard square fabric mesh, nominal mass 2,45 kg/m <sup>2</sup> with nominal 5,6mm thick wires and 200 x 200mm pitch (code 245), complying with SANS 1024/2006 requirements, in sheets 2,4 x 6m long. | m2 | 545  |   |
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**MASONRY**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**SUPPLEMENTARY PREAMBLES**

**BRICKWORK**

Sizes in descriptions

Where sizes in descriptions are given in brick units, "one  
brick" shall represent the length and "half brick" the  
width of a brick

Linings to concrete

Descriptions of linings to concrete, unless otherwise  
described, shall be deemed to include wire ties

Hollow walls etc

Descriptions of hollow walls shall be deemed to include  
wall ties and leaving every fifth perpend of the bottom  
course of the external skin open as a weep hole

Wall ties shall be vertical twist type wall ties galvanised  
750g/m<sup>2</sup> zinc in accordance to SABS - 1986, and shall  
be at every 5th brick course at 500mm centres  
staggered in diamond formation

Quantity

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Reinforced brick lintels

Lintels shall bear at least 160mm onto adjacent walling. Where such bearing cannot be obtained due to the proximity of adjacent openings the lintel shall be continuous

Face bricks

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

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, shall consist of a minimum of 6 units

**SUPERSTRUCTURE**

Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar

|   |  |    |     |
|---|--|----|-----|
| 1 | Half brick walls   | m2 | 322 |
| 2 | One brick walls  | m2 | 571 |
| 3 | 345mm Hollow walls of two half brick skins including vertical twist type wall ties | m2 | 99  |

**BRICKWORK SUNDRIES**

Brickwork reinforcement

|   |  |   |       |
|---|--|---|-------|
| 4 | 75mm Wide reinforcement built in horizontally  | m | 2,812 |
| 5 | 150mm Wide reinforcement built in horizontally | m | 3,888 |

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|   |  |    |     |  |  |
|---|--|----|-----|--|--|
| 6   | 230mm Wide reinforcement built in horizontally<br><u>"Allied Concrete" prestressed fabricated lintels</u>  | m  | 309 |  |  |
| 7   | 110 x 70mm Lintels in lengths not exceeding 3m<br><u>Turning pieces</u>  | m  | 35  |  |  |
| 8   | 230mm Wide turning pieces to lintels etc   | m  | 47  |  |  |
| 9   | 345mm Wide turning pieces to lintels etc<br><u>Galvanised hoop iron cramps, ties, etc</u>  | m  | 4   |  |  |
| 10  | 1,6mm Thick x 25mm wide galvanised metal hoop iron<br>540mm long three (3) times bent and built into brickwork   | No | 48  |  |  |
| 11  | 1,6mm Thick x 25mm wide galvanised metal hoop iron<br>450mm long two (2) times bent, with one end fixed to<br>concrete column with and including 5mm Fisher plugs<br>and screws and the other end built into brickwork | No | 2   |  |  |
| 12  | 1,6mm Thick x 25mm wide galvanised metal hoop iron<br>540mm long two (2) times bent, with one end fixed to<br>concrete column with "hilti" instructions and the other<br>end built into brickwork                      | No | 4   |  |  |
| 13  | 30 x 1,6mm Roof tie 1,5m long with one end fixed to<br>timber and other end cast into concrete   | No | 62  |  |  |
| <b><u>MOVEMENT JOINTS, ETC.</u></b>   |  |    |     |  |  |
| <u>Expansion joints with bitumen impregnated softboard<br/>between concrete and brickwork</u> |  |    |     |  |  |
| 14  | 10mm Joints not exceeding 300mm high vertically<br>between walls   | m  | 123 |  |  |
| 15  | 10mm Joints 315mm wide vertically between walls  | m  | 24  |  |  |

**FACE BRICKWORK**

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|    |   |    |     |   |
|----|---|----|-----|---|
|    | <u>Face clay face brick, size 222 x 106 x 73mm, bedded and jointed in Class I mortar and pointed with recessed vertical and recessed horizontal joints, suitable for exposure zone 1-2 (PC Amount R10 000-00/1000 VAT excl. supplied and delivered to site)</u> |    |     |   |
| 16 | Extra over brickwork for face brickwork   | m2 | 479 |   |
| 17 | Extra over brickwork for brick-on-edge header course lintel pointed on face and 110mm soffit  | m  | 47  |   |
| 18 | Extra over brickwork for brick-on-edge header course over 345mm wide wall lintel pointed on face and 230mm soffit   | m  | 4   |   |
| 19 | Fair raking cutting   | m  | 21  |   |
|    | <u>Brick-on-edge header course copings, sills, etc of (PC Amount R10 000-00/1000 VAT excl. supplied and delivered to site) face bricks pointed with recessed joints on all exposed faces</u>  |    |     |   |
| 20 | 110mm Wide sill set sloping and slightly projecting   | m  | 29  |   |
| 21 | Coping on top of 345mm brick wall   | m  | 13  |   |
| 22 | Coping on top of one brick walls  | m  | 4   |   |
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**SECTION NO. 2****BILL NO. 4****WATERPROOFING**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**WATERPROOFING TO ROOFS,  
BASEMENTS, ETC**

One layer Derbigum SP4 waterproofing membrane, with  
75mm side laps and 100mm end laps, sealed to primed  
surface to falls and crossfalls by 'torchfusion, followed  
with on layer of Derbigum SP5 waterproofing finished  
with two coats Roofcote bituminous aluminum paint.  
Waterproofing to be installed by an Approved Derbigum  
Contractor under a ten (10) years guarantee.

|   |                                     |    |     |  |
|---|-------------------------------------|----|-----|--|
| 1 | On flat floors                      | m2 | 110 |  |
| 2 | On tops and sides of inverted beams | m2 | 24  |  |

**DAMPPROOFING OF WALLS AND FLOORS**

Gundle Gunplas DPC 250 Blue Black damp proof  
course in walls to Agreement Certificate 2001/284 laid  
with minimum 150mm overlaps.

|   |          |    |    |  |
|---|----------|----|----|--|
| 3 | In walls | m2 | 61 |  |
|---|----------|----|----|--|

Gundle USB Green co ex 250µm damp proof membrane  
under concrete surface beds to SANS mark 952-1985  
type C laid with minimum 150mm overlaps and sealed  
with Gunplas pressure sensitive tape.

|   |                    |    |     |  |
|---|--------------------|----|-----|--|
| 4 | Under surface beds | m2 | 538 |  |
|---|--------------------|----|-----|--|

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**JOINT SEALANTS ETC**

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

|   |                            |   |     |
|---|----------------------------|---|-----|
| 5 | 5 x 50mm In saw cut joints | m | 114 |
|---|----------------------------|---|-----|

|   |   |   |     |
|---|---|---|-----|
| 6 | 10 x 15mm In isolation joints including raking out of expansion joint filler as necessary | m | 381 |
|---|---|---|-----|

"Sika"

|   |   |   |     |
|---|---|---|-----|
| 7 | Prepare surfaces and apply 10 x 15mm deep "Sikaflex Pro 2HP" polyurethane sealant to joints | m | 294 |
|---|---|---|-----|

"Sondor"

|   |  |   |    |
|---|--|---|----|
| 8 | Sondor Performance Foams Jointex low density (33kg/m <sup>3</sup> ), cross linked, closed cell, expanded polyethylene joint former, size 85 x 10mm thick with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation. | m | 60 |
|---|--|---|----|

|   |   |   |    |
|---|---|---|----|
| 9 | Sondor Performance Foams Jointex low density (33kg/m <sup>3</sup> ), cross linked, closed cell, expanded polyethylene joint former, size 200 x 10mm thick with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation. | m | 42 |
|---|---|---|----|

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|    |   |   |    |   |
|----|---|---|----|---|
| 10 | Sondor Performance Foams Jointex low density (33kg/m <sup>3</sup> ), cross linked, closed cell, expanded polyethylene joint former, size 315 x 10mm thick with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation. | m | 24 | R |
| 11 | Sondor Performance Foams Jointex low density (33kg/m <sup>3</sup> ), cross linked, closed cell, expanded polyethylene joint former, size 270 x 10mm thick with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation. | m | 21 |   |

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**SECTION NO. 2**

**BILL NO. 5**

**ROOF COVERINGS, ETC.**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**SUPPLEMENTARY PREAMBLES**

All items are measured net unless otherwise described

Flashings, trimming plates, etc.

Prices to include for all cutting and waste and relevant  
fixing material, unless otherwise described

All rates for flashings, trimmings, etc., to include for  
forming drips and closed ends to troughs of sheet steel  
roof covering where applicable

All items are unless otherwise described measured net

Roof:

The roof sheeting/side cladding shall be a double  
interlocking concealed-fix Saflok 700 profile roll-formed  
in continuous lengths and cut to length by pneumatic  
cut-off process from certified ZincAL 0,5mm steel. A  
certificate verifying compliance shall be issued by the  
manufacturer, Safintra roofing. The profile shall be roll  
formed with 4 ribs and centres not exceeding 233mm  
and a cover width not exceeding 700mm width. The  
male rib is to include spurs to ensure a double  
interlocking action with adjacent sheets. The minimum  
sheet depth will be 41mm. Two longitudinal stiffening  
ribs to be incorporated in each pan.

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**NEW ADDITIONS AND ALTERATIONS  
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Roof Installer:

The roof shall be installed by a Safintra accredited and approved installer, who will present their accreditation to the Architects for their scrutiny before commencing

**PROFILED METAL SHEETING AND ACCESSORIES**

Saflok 700 0,5mm Thick Colorplus AZ100, Colour to be confirmed, C.1.S finish with standard backing coat Cool Grey G550 interlocking roof sheeting with AZ100 spelter to both sides fixed to timber purlins not exceeding 1900mm centres and to ridge and eaves at not exceeding 1700mm centres. Saflok 700 ZincAL 0,8mm clips fastened with Fixtite Class 4 self tapping wafer head 10 x 22mm for timber fix all in accordance with manufacturer's recommendations.

|   |   |    |     |
|---|---|----|-----|
| 1 | Roof coverings with pitches not exceeding 25 degrees        | m2 | 528 |
| 2 | Head wall flashing 462mm girth, two times bent along girth. | m  | 9   |
| 3 | Ridge capping 462mm girth, three times bent along girth.    | m  | 37  |
| 4 | Saflok metal broad flute closure                            | m  | 9   |
| 5 | Saflok Poly closures  | m  | 9   |
| 6 | Side wall flashing 462mm girth, two times bent along girth. | m  | 17  |
| 7 | Counter flashing 185mm girth, two times bent along girth.   | m  | 26  |

**ROOF AND WALL INSULATION**

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**NEW ADDITIONS AND ALTERATIONS  
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"Isoboard" Thermal Insulation

8 Roof insulation to be Isoboard® high density 32-36kg/m<sup>3</sup> rigid extruded polystyrene 100% closed cell insulation boards 60mm thick x 600mm wide with brown paper and polyethylene laminate slip sheet factory applied to upper surface, with tongue & groove joints fixed concurrent with roof covering over timber purlins at maximum 1500mm centres with 5mm gap between boards butt-joined over purlins. Ridge vents are recommended to be allowed for in the roof covering (elsewhere specified) in order to prevent deflection due to heat build up above the boards.

- Thickness: 60mm
- Application: Roof insulation

m2

528

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**SECTION NO. 2**

**BILL NO. 6**

**CARPENTRY AND JOINERY**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**SUPPLEMENTARY PREAMBLES**

Particle board:

Particle board shall comply with the following  
specifications:

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

Joinery:

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

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

Fixing

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

Decorative laminate finish:

Laminate finish shall be glued under pressure. Edge  
strips shall be butt jointed at junctions with adjacent  
similar finish

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**NEW ADDITIONS AND ALTERATIONS  
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**EAVES, VERGES, ETC**

"Everite FC77" pressed fibre-cement

|   |  |   |    |
|---|--|---|----|
| 1 | Everite high density plain ungrooved Nutec fascia boards (Code: 041-503), size 300 x 15mm, fixed to 38 x 38mm tilter batten and 38 x 38mm support battens between rafters twice screwed with 12 x 40mm countersunk brass screws at 900mm centres to support battens with aluminium H-profile fascia joiner between boards and at board ends. | m | 82 |
|---|--|---|----|

**DOORS, ETC**

40mm Thick semi-solid core flush doors with commercial veneer hung to steel frames

|   |                        |    |    |
|---|------------------------|----|----|
| 2 | Door 813 x 2400mm high | No | 13 |
|---|------------------------|----|----|

|   |                        |    |   |
|---|------------------------|----|---|
| 3 | Door 900 x 2400mm high | No | 1 |
|---|------------------------|----|---|

40mm Thick solid flush doors with commercial veneer hung to steel frames

|   |   |    |   |
|---|---|----|---|
| 4 | Double door size 1200 x 2400mm high with two equal leaves with rebated meeting stiles | No | 2 |
|---|---|----|---|

|   |   |    |   |
|---|---|----|---|
| 5 | Double door size 1371 x 2400mm high with two unequal leaves with rebated meeting stiles and one leaf with 400 x 500mm opening fitted with 10 x 10mm wrought glazing beads on both sides | No | 5 |
|---|---|----|---|

**SUNDRIES**

|   |  |    |   |
|---|--|----|---|
| 6 | Cut opening in 44mm solid door for louvre opening 300 x 300mm high | No | 3 |
|---|--|----|---|

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Section No. 2  
BUILDINGS (PROVISIONAL)  
Bill No. 6  
CARPENTRY & JOINERY

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Section No. 2

BUILDINGS (PROVISIONAL)

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CARPENTRY & JOINERY

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CARPENTRY & JOINERY

R

**NEW ADDITIONS AND ALTERATIONS  
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SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

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**SECTION NO. 2**

**BILL NO. 7**

**CEILINGS, ETC.**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**SUPPLEMENTARY PREAMBLES**

Descriptions:

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

Items described as "plugged" shall be deemed to  
include screwing to fibre, plastic or metal plugs at not  
exceeding 600mm centres, and where described as  
"bolted" the bolts have been given elsewhere

**SUSPENDED CEILINGS**

| Quantity | Rate | Amount |
|----------|------|--------|
|----------|------|--------|

**Carried to Collection**

R

Section No. 2  
BUILDINGS (PROVISIONAL)  
Bill No. 7  
CEILINGS, ETC.

**NEW ADDITIONS AND ALTERATIONS  
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SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Lay Gyproc Gyprex® White 600mm x 600mm ceiling tile into the Gypframe™/DONN ceiling grid. Ceiling grid consisting of Gyproc/DONN Wall Angle (SM25/M6) fixed to the perimeter wall using fixings at 300mm centres. Space Gypframe™/ DONN Main Tees T38 FR at 1200mm centres. Suspend main tees using Gyproc Pre-stretched Galvanised Hanger wire 2.5mm thick or Gyproc hanger strap 19mm at 1200mm centres. Gyproc Pre-stretched Galvanised Hanger wire shall be put through the main tees hole and would wind 3 times around itself. 2 steel pop-rivets or one Gyproc Wafer Head Tek screw 13mm shall be used to fix the hanger strap to the main tees web. Install Gypframe™/DONN Cross Tees T38V/T32V (1200 long) at 600mm centres to create a 1200mm x 600mm ceiling grid. Install Gypframe™/DONN Cross Tees T38V/T32 (600 long) into the 1200mm long cross tees to create a 600mm x 600mm grid. Main tee should be fixed to the wall using angle cleats. Install Isover 135mm thick Aerolite non-combustible light weight Glasswool thermal ceiling insulation, nominal density 12kg/m³.

- 1 Ceilings suspended not exceeding 1m below timber/steel purlins at 900mm centres (trusses not exceeding at 1m centres)

m2

22

OWAcoustic®Sandila/N biologically absorbable mineral wool ceiling tiles, size 1200 x 600 x 15mm thick with square edge and white painted finish, laid on fire rated OWAconstruct® S3 exposed demountable T24 suspension system, comprising galvanised main tees and cross tees at with main tees suspended by means of galvanised hangers at centres not exceeding 1200mm with ceiling perimeter finished with OWAconstruct Perimeter L-trim, plugged and screwed at 200mm centres, and all installed to manufacturer's instructions.

- 2 Ceilings suspended not exceeding 1m below timber/steel purlins at 900mm centres (trusses not exceeding at 1m centres)

m2

406

**Carried to Collection**

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Section No. 2  
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CEILINGS, ETC.

**NEW ADDITIONS AND ALTERATIONS  
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SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

"Gyproc" cornices to suspended ceilings

3 Gyproc 47 x 35mm SM25 recessed shadowline wall  
angle (Code: 1965) plugged and screwed to wall.

m

408

**Carried to Collection**

R

Section No. 2  
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CEILINGS, ETC.

**NEW ADDITIONS AND ALTERATIONS  
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CEILINGS, ETC.

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CEILINGS, ETC.

**NEW ADDITIONS AND ALTERATIONS  
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SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

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**SECTION NO. 2**

**BILL NO. 8**

**IRONMONGERY**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**SUPPLEMENTARY PREAMBLES**

Descriptions

Items described as "plugged" shall be deemed to  
include screwing to fibre, plastic or metal plugs

**"EN-SUITE" LOCKS**

TYPE 1 - BATHROOM AND KITCHEN

| Item No | Description  | Quantity | Rate | Amount |
|---------|--|----------|------|--------|
| 1       | Dorma "DDC056501" 65mm satin nickel double cylinder (not master keyed)   | No       | 3    |        |
| 2       | Dorma "CB30" satin chrome lever handle (S/C)   | Pairs    | 3    |        |
| 3       | Dorma "D036" Cylinder lock case  | No       | 3    |        |
| 4       | Dorma "DDS-NP-018" nickel plated door stop. (N/Plated)   | No       | 3    |        |
| 5       | Dormakaba non hold open TS 90 cam action slide channel door closer (Code: TS 90) with a closing force of EN 3/4 for maximum 1 100mm wide door. | No       | 3    |        |

TYPE 2 - DISABLED

|   |  |    |   |  |
|---|--|----|---|--|
| 6 | DORMA Stainless Steel bathroom deadlock (Code: DMWC-SS-008) with 55mm backset. | No | 1 |  |
|---|--|----|---|--|

**Carried to Collection**

R

Section No. 2  
BUILDINGS (PROVISIONAL)  
Bill No. 8  
IRONMONGERY



**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

|    |  |      |   |  |   |
|----|--|------|---|--|---|
| 7  | Dormakaba non hold open TS 90 cam action slide channel door closer (Code: TS 90) with a closing force of EN 3/4 for maximum 1 100mm wide door.                             | No   | 1 |  |   |
| 8  | Dormakaba TS 90 Angle Bracket for TS90 door closer - push side fixing  | No   | 1 |  |   |
| 9  | DORMA Tubular straight Stainless Steel bolt through pull handle (Code: DPH301CBT), size 19mm diameter x 149mm long   | No   | 1 |  |   |
| 10 | DORMA grade 304 Stainless Steel plate size 75 x 170 x 1,2mm with counter-sunk fixing holes plugged and screwed with fixing screws.   | No   | 1 |  |   |
| 11 | DORMA 52 x 52mm Stainless Steel square bathroom WC bolt set (Code: DWC-006).   | Sets | 1 |  |   |
| 12 | DORMA 200mm high x 900mm wide x 1,2mm thick Grade 430 Stainless Steel kick plate with ten (10) counter sunk holes for screw fixing   | No   | 1 |  |   |
| 13 | DORMA "Disabled" engraved grade 304 Stainless Steel sign (Code: DSS-133), size 150 x 150 x 1,2mm with counter-sunk fixing holes plugged and screwed with aluminium screws. | No   | 1 |  |   |
| 14 | DORMA "Female" engraved grade 304 Stainless Steel sign (Code: DSS-131), size 150 x 150 x 1,2mm with counter-sunk fixing holes plugged and screwed with aluminium screws.   | No   | 1 |  |   |
| 15 | DORMA "Male " engraved grade 304 Stainless Steel sign (Code: DSS-130), size 150 x 150 x 1,2mm with counter-sunk fixing holes plugged and screwed with aluminium screws.    | No   | 1 |  |   |
| 16 | DORMA Male/Female fixing screws  | No   | 9 |  |   |
|    | <b>Carried to Collection</b>   |      |   |  | R |
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**NEW ADDITIONS AND ALTERATIONS  
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SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

| <u>TYPE 3 - WC</u>   |   |       |    |   |
|--|---|-------|----|---|
| 17   | Dorma DDWC-006 stainless steel WC indicator with 79mm turn knob for physically impaired. (St/Steel)   | Pairs | 3  |   |
| 18   | Dorma DPH301C 150 x 19mm stainless steel "D" shaped straight bolt through pull handle (St/Steel)  | Pairs | 3  |   |
| 19   | Dorma DHC-SS-031B stainless steel hat and coat hook with rubber buffer. (St/Steel)  | No    | 3  |   |
| 20   | Dorma DDS-NP-018 nickel plated floor stop. (N/Plated)   | No    | 3  |   |
| <u>TYPE 4 - OFFICES AND STORES</u>                                   |   |       |    |   |
| 21   | Dormakaba Tubular Stainless Steel 148mm long spring loaded lever handle in Stainless Steel finish (Code: TH122 cylinder).                         | No    | 7  |   |
| 22   | Dormakaba Stainless Steel narrow stile heavy duty swivel sash lock (Code: D07625) with 25mm backset.  | No    | 7  |   |
| 23   | DORMA Satin Nickel 66mm master keyed double cylinder (Code: DDC106601).   | No    | 7  |   |
| 24   | DORMA Nickel Plated floor mounted door stop (Code: DDS-NP-018), size 24 x 45mm fixed in accordance with the manufacturer's recommendations.       | No    | 7  |   |
| 25   | Dorma "DHC-SS-031B" stainless steel hat and coat hook with rubber buffer.   | No    | 5  |   |
| <u>TYPE 5 - WARDS</u>  |   |       |    |   |
| 26   | Dormakaba Stainless Steel floor mounted door stop (Code: DDS-SS-017), size 24 x 45mm fixed in accordance with the manufacturer's recommendations. | No    | 10 |   |
| 27   | 150mm high x 1.2mm thick x 900mm long grade 304 satin finished stainless steel push plate.  | No    | 5  |   |
| <b>Carried to Collection</b>   |   |       |    | R |
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**NEW ADDITIONS AND ALTERATIONS  
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|   |   |    |    |   |  |
|---|---|----|----|---|--|
| 28  | 150mm high x 1,2mm thick x 470mm long grade 304 satin finished stainless steel push plate.  | No | 5  |   |  |
| 29  | 150mm high x 1.2mm thick x 900mm long grade 304 satin finished stainless steel push plate.  | No | 5  |   |  |
| 30  | 300mm high x 1.2mm thick x 470mm long grade 304 satin finished stainless steel kick plate.  | No | 5  |   |  |
| 31  | Dormakaba non hold open TS 90 cam action slide channel door closer (Code: TS 90) with a closing force of EN 3/4 for maximum 1 100mm wide door.    | No | 10 |   |  |
| 32  | DORMA Nickel plated Rebate conversion kit for Euro Profile locks  | No | 5  |   |  |
| 33  | Dormakaba TS 90 Angle Bracket for TS90 door closer - push side fixing   | No | 10 |   |  |
| <u>TYPE 6 - CUPBOARDS</u>   |   |    |    |   |  |
| 34  | 150mm Wide x 250mm high x 1,2mm thick grade 304 satin finished stainless steel push plate.  | No | 2  |   |  |
| 35  | Dormakaba Stainless Steel floor mounted door stop (Code: DDS-SS-017), size 24 x 45mm fixed in accordance with the manufacturer's recommendations. | No | 4  |   |  |
| 36  | Dorma "DDC056501" 65mm satin nickel double cylinder (not master keyed)  | No | 2  |   |  |
| 37  | Dorma "CB30" satin chrome lever handle (S/C)  | No | 2  |   |  |
| 38  | Dorma "D036" Cylinder lock case   | No | 2  |   |  |
| 39  | DORMA Nickel plated Rebate conversion kit for Euro Profile locks DO36S,D037D  | No | 2  |   |  |
| <b>Carried to Collection</b>  |   |    |    |   |  |
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**NEW ADDITIONS AND ALTERATIONS  
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|   |  |    |   |  |   |
|---|--|----|---|--|---|
| 40  | "Electrical" engraved grade 304 Stainless Steel sign (Code: DSS-136), size 150 x 150 x 1,2mm with counter-sunk fixing holes plugged and screwed with aluminium screws.   | No | 1 |  |   |
| 41  | "Fire hose reel" engraved grade 304 Stainless Steel sign (Code: DSS-145), size 150 x 150 x 1,2mm with counter-sunk fixing holes plugged and screwed with aluminium screws.   | No | 1 |  |   |
| <b><u>BATHROOM FITTINGS</u></b>                                       |  |    |   |  |   |
| <u>"Franke"</u>   |  |    |   |  |   |
| 42  | Franke BHM12P polished stainless steel double double towel rail (Code: 2120083), size 900 x 125mm deep, plugged and screwed to the wall with stainless steel screws.   | No | 1 |  |   |
| 43  | Franke Stratos STRX 672 1,2/1,5mm thick Grade 304 18/10 satin stainless steel toilet roll holders (code: 359716), size 304 x 156 x 140,7mm deep for 2 rolls maximum 108mm diameter with spindle system and cylinder lock with standard Franke key, plugged and screwed to the wall with stainless steel screws.                    | No | 4 |  |   |
| 44  | Franke Stratos STRX 618 1,2/1,5mm thick Grade 304 18/10 satin stainless steel soap dispensers (code: 359705), size 304 x 100 x 134mm deep with a replaceable and refillable 1 litre container, cylinder lock with standard Franke key, plugged and screwed to the wall with stainless steel screws.                                | No | 8 |  |   |
| 45  | Franke HF2400HD 1,2/1,5mm thick satin finished stainless steel automatic hands free hand dryer (Code: 2500001), size 280 x 207 x 245mm high with 2 vandal proof lock screws and key wrench, plugged and screwed to the wall with stainless steel screws, 200 W motor connected to 230/240 volt power supply. With 5 year warranty. | No | 8 |  |   |
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|    |   |    |    |   |
|----|---|----|----|---|
| 46 | Franke CNTX750 Grade 304 18/10 stainless steel 32mm diameter straight grab rail with Franke fine grip (Code: 2510006) 750mm x 95mm deep, plugged and screwed to the wall with stainless steel screws.     | No | 1  |   |
| 47 | Franke CNTX21 Grade 304 18/10 stainless steel 32mm diameter angle bar with Franke fine grip (Code: 2510008), size 415 x 415 x 95mm deep, plugged and screwed to the wall with stainless steel screws.     | No | 1  |   |
|    | <u>"Volkem Cleaning and Hygiene Solutions"</u>  |    |    |   |
| 48 | Volkem satin finished stainless steel pedestal operated sanitary towel disposal bin (Code: SB008), with capacity of 20 litres, plugged and screwed to the wall with stainless steel screws.               | No | 3  |   |
|    | <b><u>PINNING BOARDS, WRITING BOARDS,<br/>PROJECTION SCREENS, ETC</u></b>   |    |    |   |
|    | <u>"Vitrex".</u>  |    |    |   |
| 49 | Vitrex "Code 2304" standard wall mounted educational range pinning board size 1500 x 1000mm high with Flortime Premier pinning surface, supplied complete with fixing components and secured to brickwork | No | 11 |   |
| 50 | Vitrex "Code 2304" standard wall mounted educational range pinning board size 3000 x 1000mm high with Flortime Premier pinning surface, supplied complete with fixing components and secured to brickwork | No | 1  |   |
| 51 | Vitrex "Code 2304" standard wall mounted white writing board size 1500 x 1000mm high with Flortime Premier pinning surface, supplied complete with fixing components and secured to brickwork             | No | 9  |   |
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**NEW ADDITIONS AND ALTERATIONS  
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**SUNDRIES, ETC**

52 Interior stainless steel dividing strip in Stainless Steel finish, size 14 x 7mm x 2,5m fixed to substrate with silicone sealant (PC Amount R75-00/m Vat excl. supplied)

m 12

**DOOR GRILLES**

"Trox Technik" natural anodised aluminium finished louvres

53 Trox or similar approved natural aluminium door louvre size 500 x 300mm high

No 4

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**NEW ADDITIONS AND ALTERATIONS  
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**SECTION NO 2**

**BILL NO. 9**

**STRUCTURAL STEELWORK**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**SUPPLEMENTARY PREAMBLES**

Descriptions

Descriptions of bolts shall be deemed to include nuts  
and washers

Descriptions of L-shaped and U-shaped anchor bolts  
shall be deemed to include bending, threading, nuts and  
washers and embedding in concrete

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

Descriptions of L-shaped and U-shaped anchor bolts  
shall be deemed to include bending, threading, nuts and  
washers and embedding in concrete. Where anchor  
bolts are described as embedded in sides or soffits of  
concrete it shall be deemed to include holes through  
formwork.

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

**STEEL COLUMNS AND BEAMS**

**Carried to Collection**

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BUILDINGS (PROVISIONAL)  
Bill No. 9  
STRUCTURAL STEELWORK

| Quantity | Rate | Amount |
|----------|------|--------|
|----------|------|--------|

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**NEW ADDITIONS AND ALTERATIONS  
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SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

| <u>Welded columns in single lengths with flat section base and connection plates bolted to concrete</u> |   |    |    |   |
|---|---|----|----|---|
| 1   | 75 x 75 x 4mm Thick square hollow section 4400mm high with 6mm fillet welding to top and bottom plates (plates e/m)           | No | 1  |   |
| 2   | 100 x 100 x 4mm Thick square hollow section 4400mm high with 6mm fillet welding to top and bottom plates (plates e/m)         | No | 4  |   |
| <b><u>SUNDRY STEELWORK</u></b>  |   |    |    |   |
| <u>Fixing plates, etc.</u>  |   |    |    |   |
| 3   | 150 x 150 x 10mm Thick top plate with four (4) x 250mm long Y16 fixing lugs, both lugs once bent and welded to the top plate  | No | 2  |   |
| 4   | 220 x 220 x 10mm Thick bottom plate with four (4) x 18mm diameter holes for bolts (e/m)                                       | No | 2  |   |
| 5   | 550 x 150 x 10mm Thick top plate with six (6) x 250mm long Y16 fixing lugs, both lugs once bent and welded to the top plate   | No | 1  |   |
| 6   | 620 x 220 x 10mm Thick bottom plate with eight (8) x 18mm diameter holes for bolts (e/m)                                      | No | 1  |   |
| <u>Bolts to columns etc.</u>  |   |    |    |   |
| 7   | M16 Chemical anchors fixed with HIT-HY 200 chemical system all in strict accordance to the manufacturer's strict instructions | No | 16 |   |
| <b>Carried to Collection</b>  |   |    |    |   |
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**NEW ADDITIONS AND ALTERATIONS  
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STRUCTURAL STEELWORK

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Quantity

Rate

Amount

**SECTION NO. 2**

**BILL NO. 10**

**METALWORK**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**SUPPLEMENTARY PREAMBLES**

Descriptions

Descriptions of bolts shall be deemed to include nuts and washers Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described

Drawings

Tenderers are referred to architect's drawings annexed to this document for full details of the windows, doors, etc

**ALUMINIUM WINDOWS, DOORS, ETC**

AAAMSA guide

All windows, doors, etc shall comply with and meet the minimum recommended performance requirements as set out in the General Specification for Architectural Aluminium and Glass Products (Third Edition) as published by the Association of Architectural Aluminium Manufacturers of South Africa (AAAMSA)

**Carried to Collection**

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Section No. 2  
BUILDINGS (PROVISIONAL)  
Bill No. 10  
METALWORK

**NEW ADDITIONS AND ALTERATIONS  
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SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Finish

The windows, doors, etc shall be natural anodised to a thickness of 25 micron and shall comply with SABS 999 and 1407

Glass

Glazing to be with patent rubber gaskets with glazing beads and comply with BS 952. Thickness of glass shall be in accordance with table 1 (Part N : Glazing ). Safety glass shall comply with SABS 1263. The National Building Regulations shall be observed with regard to the specification of safety glass

Design indemnity

The contractor is to submit with his tender the "Form of Indemnity", annexed to this document, fully completed and signed

Drawings

Tenderers are referred to architect's drawings annexed to these bills of quantities for full details of windows, doors, etc

Pricing.

All window prices should include aluminium louvres as shown

General

Workshop drawings to be approved by the architect before manufacture

**PRESSED STEEL DOOR FRAMES**

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

|   |  |    |    |
|---|--|----|----|
| 1 | Frame for door 813 x 2400m high        | No | 11 |
| 2 | Frame for door size 1200 x 2400mm high | No | 1  |

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Section No. 2  
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METALWORK

**NEW ADDITIONS AND ALTERATIONS  
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|   |  |    |    |   |
|---|--|----|----|---|
| 3   | Frame for door size 1371 x 2400mm high<br><u>1,2mm Double rebated frames suitable for one brick walls</u>  | No | 5  |   |
| 4   | Frame for door 813 x 2400mm high   | No | 2  |   |
| 5   | Frame for door 900 x 2400mm high   | No | 1  |   |
| 6   | Frame for door 1200 x 2400mm high  | No | 1  |   |
| <b><u>ALUMINIUM WINDOWS, DOORS, ETC.</u></b>  |  |    |    |   |
| <u>Purpose made epoxy powder coated aluminium windows glazed with 6,38mm clear float glass and plugged to brickwork or concrete</u> |  |    |    |   |
| 7   | Purpose made window size 600 x 600mm high (PC Amount R1 100-00 each VAT excl. supplied, delivered and installed on site by an approved Specialist)       | No | 6  |   |
| 8   | Purpose made window size 900 x 1200mm high (PC Amount R3 240-00 each VAT excl. supplied, delivered and installed on site by an approved Specialist)      | No | 28 |   |
| 9   | Purpose made door size 2058 x 2400mm high (PC Amount R15 000-00 each VAT excl. supplied, delivered and installed on site by an approved specialist)      | No | 1  |   |
| 10  | Purpose made shopfront size 1933 x 2400mm high (PC Amount R14 000-00 each VAT excl. supplied, delivered and installed on site by an approved specialist) | No | 1  |   |
| <b>Carried to Collection</b>  |  |    |    | R |
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**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

|    |  |                              |   |   |
|----|--|------------------------------|---|---|
| 11 | Purpose made shopfront size 2085 x 2635mm high (PC Amount R16 500-00 each VAT excl. supplied, delivered and installed on site by an approved Specialist) | No                           | 1 |   |
| 12 | Purpose made door size 1800 x 2400mm high (PC Amount R12 960-00 each VAT excl. supplied, delivered and installed on site by an approved Specialist)      | No                           | 3 |   |
| 13 | Purpose made shopfront size 2533 x 2635mm high (PC Amount R20 000-00 each VAT excl. supplied, delivered and installed on site by an approved specialist) | No                           | 1 |   |
| 14 | Purpose made shopfront size 3485 x 2400mm high (PC Amount R25 000-00 each VAT excl. supplied, delivered and installed on site by an approved specialist) | No                           | 1 |   |
| 15 | Purpose made door size 5000 x 2635mm high (PC Amount R40 000-00 each VAT excl. supplied, delivered and installed on site by an approved specialist)      | No                           | 1 |   |
|    |  | <b>Carried to Collection</b> |   | R |

Section No. 2  
BUILDINGS (PROVISONAL)  
Bill No. 10  
METALWORK

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Section No. 2

BUILDINGS (PROVISIONAL)

Bill No. 10

METALWORK

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Section No. 2  
BUILDINGS (PROVISIONAL)  
Bill No. 10  
METALWORK

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

| Item No | <b><u>SECTION NO. 2</u></b>   | Quantity | Rate  | Amount |
|---------|---|----------|-------|--------|
|         | <b><u>BILL NO. 11</u></b>   |          |       |        |
|         | <b><u>PLASTERING</u></b>  |          |       |        |
|         | For Preambles refer to "Department of Public Works: Specification of material and methods to be used - PW371"   |          |       |        |
|         | <b><u>SUPPLEMENTARY PREAMBLES</u></b>   |          |       |        |
|         | <u>Plastering of concrete soffits</u>   |          |       |        |
|         | The plasterer should make sure that the surface to be plastered does not deviate from the required plane by more than 10mm. All high areas should be removed by hacking or cutting. Fill low areas by applying undercoats of plaster not exceeding 15m in thickness, apply one coat plaster to surface, leave to stiffen, strike off with a striker board, and wood float to an even surface and to a thickness of 10 - 15mm thick. |          |       |        |
|         | <b><u>SCREEDS</u></b>   |          |       |        |
|         | <u>Screeds on concrete</u>  |          |       |        |
| 1       | 20mm Thick on floors and landings   | m2       | 543   |        |
|         | <b><u>INTERNAL PLASTER</u></b>  |          |       |        |
|         | <u>Cement plaster on brickwork</u>  |          |       |        |
| 2       | On walls  | m2       | 1,465 |        |
| 3       | On narrow widths  | m2       | 25    |        |
|         | <b><u>EXTERNAL PLASTER</u></b>  |          |       |        |
|         | <b>Carried to Collection</b>  |          |       | R      |
|         | Section No. 2<br>BUILDINGS (PROVISIONAL)<br>Bill No. 11<br>PLASTERING   |          |       |        |



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**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Cement plaster on brickwork

|   |                  |    |    |  |  |
|---|------------------|----|----|--|--|
| 4 | On walls         | m2 | 40 |  |  |
| 5 | On narrow widths | m2 | 15 |  |  |

**Carried to Collection**

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Section No. 2  
BUILDINGS (PROVISIONAL)  
Bill No. 11  
PLASTERING

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Section No. 2

BUILDINGS (PROVISIONAL)

Bill No. 11

PLASTERING

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Section No. 2  
BUILDINGS (PROVISIONAL)  
Bill No. 11  
PLASTERING

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

| Item No | <b><u>SECTION NO. 2</u></b>   | Quantity | Rate | Amount |
|---------|---|----------|------|--------|
|         | <b><u>BILL NO. 12</u></b>   |          |      |        |
|         | <b><u>TILING</u></b>  |          |      |        |
|         | For Preambles refer to "Department of Public Works: Specification of material and methods to be used - PW371"   |          |      |        |
|         | <b><u>WALL TILING</u></b>   |          |      |        |
|         | <u>300 x 200 x 5mm Porcelain tiles flush pointed with tinted jointing compound on brickwork including cement (PC R225,00/m2 Vat excl)</u>   |          |      |        |
| 1       | On walls  | m2       | 203  |        |
| 2       | On narrow widths, etc.  | m2       | 2    |        |
| 3       | On walls in isolated panels, splashbacks, etc   | m2       | 2    |        |
| 4       | Fair exposed cutting and fitting around pipe not exceeding 100mm diameter   | No       | 12   |        |
| 5       | Fair exposed cutting and fitting around pipe exceeding 100mm and not exceeding 200mm diameter   | No       | 4    |        |
|         | <b><u>FLOOR TILING</u></b>  |          |      |        |
|         | <u>500 x 500 x 5mm Matt porcelain floor tiles (PC R275.00/m2 VAT excl) fixed with Ceresit Tylon adhesive to screeds (screeds elsewhere) with straight joints in both direction flush pointed with Ceresit Tylon 33 tinted jointing compound</u> |          |      |        |
| 6       | On floors and landings  | m2       | 436  |        |
|         | <b>Carried to Collection</b>  |          |      |        |
|         | Section No. 2<br>BUILDINGS (PROVISIONAL)<br>Bill No. 12<br>TILING   |          |      | R      |

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

|    |  |    |     |
|----|--|----|-----|
| 7  | Skirting of 500 x 100mm high cut tile  | m  | 174 |
|    | <u>500 x 500 x 5mm Terracota floor tiles (PC R250.00/m2 VAT excl) fixed with Ceresit Tylon adhesive to screeds (screeds elsewhere) with straight joints in both direction flush pointed with Ceresit Tylon 33 tinted jointing compound</u> |    |     |
| 8  | On floors and landings   | m2 | 106 |
| 9  | Skirting of 500 x 100mm high cut tile  | m  | 45  |
|    | <b><u>EDGES, ETC.</u></b>  |    |     |
|    | <u>Sundries</u>  |    |     |
| 10 | Aluminium edge strip on top of cut skirting (PC Amount R55-00/m Vat excl. supplied and delivered to site)  | m  | 238 |

**Carried to Collection**

Section No. 2  
BUILDINGS (PROVISIONAL)  
Bill No. 12  
TILING

R

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Section No. 2

BUILDINGS (PROVISIONAL)

Bill No. 12

TILING

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Section No. 2  
BUILDINGS (PROVISIONAL)  
Bill No. 12  
TILING

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

| Item<br>No | <b><u>SECTION NO. 2</u></b>   | Quantity | Rate | Amount |
|------------|---|----------|------|--------|
|            | <b><u>BILL NO. 13</u></b>   |          |      |        |
|            | <b><u>GLAZING</u></b>   |          |      |        |
|            | For Preambles refer to "Department of Public Works:<br>Specification of material and methods to be used -<br>PW371"   |          |      |        |
|            | <b><u>GLAZING TO WOOD WITH PINNED ON<br/>BEADS (BEADS ELSEWHERE)</u></b>  |          |      |        |
|            | <u>4mm Clear float glass</u>  |          |      |        |
| 1          | Panes not exceeding 0,1 m2 and not exceeding 0,5m2  | m2       | 1    |        |
|            | <b><u>MIRRORS, ETC</u></b>  |          |      |        |
|            | <u>6mm Silvered float glass copper backed mirrors with<br/>polished edges, holed for and fixed with chromium<br/>plated dome capped mirror screws with rubber buffers to<br/>plugs in brickwork or concrete</u> |          |      |        |
| 2          | Mirror 600 x 900mm high with four (4) screws  | No       | 10   |        |
|            | <b>Carried Forward to Summary of Section No. 2</b>  |          |      | R      |
|            | Section No. 2<br>BUILDINGS (PROVISONAL)<br>Bill No. 13<br>GLAZING   |          |      |        |

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

| Item<br>No | <b><u>SECTION NO. 2</u></b>   | Quantity | Rate  | Amount |
|------------|---|----------|-------|--------|
|            | <b><u>BILL NO. 14</u></b>   |          |       |        |
|            | <b><u>PAINTWORK</u></b>   |          |       |        |
|            | For Preambles refer to "Department of Public Works:<br>Specification of material and methods to be used -<br>PW371"   |          |       |        |
|            | <b><u>ON FLOATED PLASTER</u></b>  |          |       |        |
|            | <u>Plascon Double Velvet to interior new cement plaster (NW 200). Surface to be dry, sound and clean and cured for a minimum of 14 days, with a moisture content measured with a Doser Hygrometer (or equivalent), of BD 2 scale - 8% or less. Prime with one coat of Plascon Plaster Primer (UC 56) with an overcoating time of 16 hours and finish with two coats of Double Velvet (VEL) with 2 hours drying time between coats, for a maintenance cycle of 7 years in a C1 - inland environment.</u> |          |       |        |
| 1          | On internal walls   | m2       | 1,283 |        |
|            | <u>Dulux Weatherguard modified acrylic paint (colour to be selected) to exterior cement plaster. Surface to be clean, dry and dust free with a moisture content of less than 15%. Prime surface with one coat Dulux Primer for New Plaster (Code: D36) with an overcoating time of 18 hours and finish with two coats Dulux Weatherguard (Code: D20), thinning the first coat up to 10% with water with an overcoating time of 4 hours.</u>   |          |       |        |
| 2          | On external walls   | m2       | 55    |        |
|            | <b><u>ON SMOOTH CONCRETE</u></b>  |          |       |        |
|            | <b>Carried to Collection</b>  |          |       |        |
|            | Section No. 2<br>BUILDINGS (PROVISONAL)<br>Bill No. 14<br>PAINTING  |          |       | R      |

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

|   |   |    |     |   |
|---|---|----|-----|---|
|   | <p><u>Plascon Polycell Ripple Finish to interior new cement plaster (NW 241).Surface to be dry, sound and clean and cured for a minimum of 14 days, with a moisture content measured with a Doser Hygrometer (or equivalent), of BD 2 scale - 8% or less. Prime with one coat Plascon Plaster Primer (UC 56) with an overcoating time of 16 hours and finish with two coats Polycell Ripple Finish (990101) with 16 hours drying time between coats, for a maintenance cycle of 7 years in a C1 - inland environment.</u></p> |    |     |   |
| 3   | <p>On concrete soffits</p>  | m2 | 110 |   |
|   | <p><u>Prepare and apply one coat "Plascon" universal undercoat and two coats "Plascon Polvin" exterior quality acrylic paint</u></p>  |    |     |   |
| 4   | <p>On concrete columns</p>  | m2 | 3   |   |
| <b><u>ON FIBRE-CEMENT</u></b>   |   |    |     |   |
|   | <p><u>Plascon Professional Gloss Enamel to exterior new fibre cement (NW 172).Surface to be dry, sound and clean, with a moisture content, measured with a Doser Hygrometer (or equivalent), of BD 2 scale - 8% or less. Prime with one coat of Professional Primer (PP 700) with an overcoating time of 16 hours and finish with two coats of Professional Gloss Enamel (PSB 800) with 16 hours drying time between coats, for a maintenance cycle of 2 years in a C1 - inland environment.</u></p>                          |    |     |   |
| 5   | <p>On fascias and barge boards not exceeding 300 mm girth</p>   | m2 | 28  |   |
| <b><u>ON WOOD</u></b>   |   |    |     |   |
| <b>Carried to Collection</b>  |   |    |     |   |
| <p>Section No. 2<br/>BUILDINGS (PROVISIONAL)<br/>Bill No. 14<br/>PAINTING</p> |   |    |     | R |



**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

|   |  |    |     |   |
|---|--|----|-----|---|
|   | <u>Plascon Professional Eggshell Enamel to interior new wood. Surface to be dry, sound and clean. Wash knots and resinous areas with Lacquer Thinners (ILS 1) and coat with Woodcare Knot Seal (PK 2) and apply one coat of Plascon Woodcare Pretreatment (WWP 1), overcoated within 48 hours with a moisture content, measured with a Doser Hygrometer (or equivalent), of BD 2 scale (A1-A5) &lt; 14% or less. Prime with one coat Professional Wood Primer (PP 800) with an overcoating time of 16 hours and finish with two coats Professional Eggshell Enamel (PSB 700) with 16 hours drying time between coats, for a maintenance cycle of 5 years in a C1 - inland environment.</u> |    |     |   |
| 6 | On doors   | m2 | 106 |   |
|   | <b><u>ON METAL</u></b>   |    |     |   |
|   | <u>Remove all loose factory primer rust millstrate, etc. prepare and apply one coat Namelcote Zinc Chromate Metal primer (US.53), apply one coat of Merit Undercoat (UC.1), and two coats "Plascon Super Universal Enamel" paint (Colour: PWD G18)</u>   |    |     |   |
| 7 | On door frames   | m2 | 42  |   |
| 8 | On columns and beams   | m2 | 6   |   |
| 9 | On rails, bars, pipes, etc not exceeding 300 mm girth  | m  | 4   |   |
|   | <b><u>PAINTWORK ETC TO PREVIOUSLY PAINTED WORK</u></b>   |    |     |   |
|   | <b><u>ON METAL</u></b>   |    |     |   |
|   | <b>Carried to Collection</b>   |    |     | R |
|   | Section No. 2<br>BUILDINGS (PROVISIONAL)<br>Bill No. 14<br>PAINTING  |    |     |   |

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Plascon Velvaglo Satin to exterior new galvanised steel. Surface to be dry, sound and clean. Apply Metalcare Galvanised Iron Cleaner (GIC 1) to all bare galvanised areas. Allow to react for 1 minute and rinse off with tap water using bristle brush or Scotch Brite pads to remove all surface contaminants, until surface is water break-free. Prime with one coat Metalcare Galvanised Iron Primer (GIP 1) with an overcoating time of 24 hours and finish with two coats Velvaglo Satin (VLO) with 16 hours drying time between coats, for a maintenance cycle of 12 years in a (environment condition)

|    |                             |    |    |
|----|-----------------------------|----|----|
| 10 | On door frames              | m2 | 12 |
| 11 | On windows and burglar bars | m2 | 44 |

**ON FLOATED PLASTER**

Prepare and apply one coat Merit Plaster Primer (UC. 56) thinned 20% with Spick & Span Mineral Turpentine (AZH.1), stop with interior Pollyfilla and apply one coat of "Plascon Vevaglo" polyurethane Velvet Enamel Paint on previously painted walls in good condition (Colour: Tequilla VLO 10) or similar approved

|    |                   |    |     |
|----|-------------------|----|-----|
| 12 | On external walls | m2 | 211 |
|----|-------------------|----|-----|

**ON WOOD**

Prepare and apply one "Plascon" universal undercoat for all surfaves and two coats "Plascon Velvaglo" paint on previously painted surfaces in good condition (Colour: Clay Store CLO)

|    |          |    |   |
|----|----------|----|---|
| 13 | On doors | m2 | 8 |
|----|----------|----|---|

**Carried to Collection**

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Section No. 2  
BUILDINGS (PROVISIONAL)  
Bill No. 14  
PAINTING

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Plascon Woodcare Clear Varnish to existing solvent based coated exterior wood. Remove loose and peeling paint by scraper or hand sanding. Feather edges and dust off. Spot prime bare areas with Wood Varnish (thinned 20% with Mineral Turpentine). Ensure surfaces are clean, dry and sound. To determine the moisture content, use a Doser Hygrometer scale A1 - A5 (or equivalent) depending on generic wood type. Measurements should be <14% before painting. Sand wood to a smooth finish with 150 grit paper in direction of grain. Dust off. Finish with two coats Woodcare Clear Varnish (CVE 5) with 16 hours drying time between coats, for a maintenance cycle of 2 years in a C1 - inland environment.

14 On doors

m2

6

**Carried to Collection**

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Section No. 2  
BUILDINGS (PROVISIONAL)  
Bill No. 14  
PAINTING

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Section No. 2

BUILDINGS (PROVISIONAL)

Bill No. 14

PAINTING

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BUILDINGS (PROVISIONAL)  
Bill No. 14  
PAINTING

NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA

| Bill No | Section No. 2  | Page No | Amount |
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|         | BUILDINGS (PROVISONAL)                                 |         |        |
|         | <b><u>SECTION SUMMARY - BUILDINGS (PROVISONAL)</u></b> |         |        |
| 1       | FOUNDATIONS  | 40      |        |
| 2       | CONCRETE, FORMWORK & REINFORCEMENT                     | 46      |        |
| 3       | MASONRY  | 51      |        |
| 4       | WATERPROOFING  | 55      |        |
| 5       | ROOF COVERING, ETC.                                    | 59      |        |
| 6       | CARPENTRY & JOINERY                                    | 62      |        |
| 7       | CEILINGS, ETC.   | 66      |        |
| 8       | IRONMONGERY  | 74      |        |
| 9       | STRUCTURAL STEELWORK                                   | 77      |        |
| 10      | METALWORK  | 82      |        |
| 11      | PLASTERING   | 85      |        |
| 12      | TILING   | 88      |        |
| 13      | GLAZING  | 89      |        |
| 14      | PAINTING   | 95      |        |
|         | <b>Carried to Final Summary</b>                        |         | R      |
|         | Section No. 2<br>BUILDINGS (PROVISONAL)                |         |        |

## **SECTION 3: PLUMBING & DRAINAGE**

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

| Item<br>No  |  | Quantity | Rate | Amount |
|---|--|----------|------|--------|
| <b><u>SECTION NO. 3</u></b>   |  |          |      |        |
| <b><u>BILL NO. 1</u></b>  |  |          |      |        |
| <b><u>RAINWATER DISPOSAL</u></b>  |  |          |      |        |
| For Preambles refer to "Department of Public Works:<br>Specification of material and methods to be used -<br>PW371"   |  |          |      |        |
| <b><u>RAINWATER DISPOSAL</u></b>  |  |          |      |        |
| <u>0,9mm Thick epoxy coated externally seamless<br/>aluminium gutters in standard lengths, butt strap joints<br/>riveted and silicone sealed, including cut and mitred<br/>angles, stop ends riveted and all sealed on the inside<br/>with Dow Corning 813 silicone sealer, secured to fibre<br/>cement fascia with external brackets</u> |  |          |      |        |
| 1   | 125 x 150 x 125mm Eaves gutters  | m        | 82   |        |
| 2   | 75 x 100mm Rainwater pipes   | m        | 21   |        |
| 3   | Extra over rainwater pipe for eaves or plinth offset<br>450mm projection | No       | 6    |        |
| 4   | Extra over 75 x 100mm rainwater pipe for shoe                            | No       | 6    |        |
| 5   | Extra over eaves gutter for opening for 75 x100mm<br>downpipe            | No       | 6    |        |
| 6   | Extra over eaves gutter for stopped ends                                 | No       | 2    |        |
| <u>Cast iron pipes</u>  |  |          |      |        |
| 7   | 110mm Diameter rainwater pipes   | m        | 22   |        |
| <b>Carried to Collection</b>  |  |          |      | R      |
| Section No. 3<br>PLUMBING & DRAINAGE (PROVISIONAL)<br>Bill No. 1<br>RAINWATER DISPOSAL  |  |          |      |        |

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

|  |   |    |   |   |
|--|---|----|---|---|
|  | <u>Extra over cast iron pipes for fittings</u>  |    |   |   |
| 8  | Extra over cast iron rainwater pipe for shoe  | No | 6 |   |
|  | <u>"Fulbore" cast iron outlets</u>  |    |   |   |
| 9  | Saint Gobain Pipelines South Africa 110mm 180° vertical roof outlet eared with dome grate code 03530. | No | 6 |   |
| <b>Carried to Collection</b>   |   |    |   | R |
| Section No. 3<br>PLUMBING & DRAINAGE (PROVISIONAL)<br>Bill No. 1<br>RAINWATER DISPOSAL |   |    |   |   |



**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Section No. 3

PLUMBING & DRAINAGE (PROVISIONAL)

Bill No. 1

RAINWATER DISPOSAL

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Bill No. 1  
RAINWATER DISPOSAL

R

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

| Item No |  | Quantity | Rate | Amount |
|---------|--|----------|------|--------|
|         | <b><u>SECTION NO. 3</u></b>  |          |      |        |
|         | <b><u>BILL NO. 2</u></b>   |          |      |        |
|         | <b><u>SANITARY FITTINGS ETC</u></b>  |          |      |        |
|         | For Preambles refer to "Department of Public Works:<br>Specification of material and methods to be used -<br>PW371"  |          |      |        |
|         | <b><u>SANITARY FITTINGS</u></b>  |          |      |        |
|         | <u>"Vaal"</u>  |          |      |        |
| 1       | Vaal Sanitaryware Hibiscus Elite vitreous china close coupled suite colour White (Code: 772401WH), overall size 643 x 355 x 830mm high with Hibiscus Jazz thermoset seat (Code: 8531Z000), comprising 90° outlet open rim pan (Code: 772300WH) with matching 6/3 litre top dual flush cistern (Code: 7373DT) including lid and fitments.   | No       | 3    |        |
| 2       | Vaal Sanitaryware Protea Paraplegic vitreous china floor mounted paraplegic washdown suite colour White (Code: 750246WH), comprising 90° outlet pan (Code: 750202WH) and matching 9 litre cistern, including lid, fitments and purpose-made chromium plated side flush lever (Code: 7100LLWH).   | No       | 1    |        |
| 3       | Vaal Sanitaryware Hibiscus vitreous china wall hung basin colour White (Code: 702303WH) with Classic floor mounted pedestal (Code: 715000WH), overall size 510 x 405mm with one taphole including integrated overflow and chainstay hole(basin waste text)(basin waste code prefix)(basin waste code)(basin waste code suffix), bolted to wall with 2No.10mm bolts (Code: 8448Z000) and sealed with silicone sealant where basin meets wall. | No       | 1    |        |
|         | <b>Carried to Collection</b>   |          |      | R      |
|         | Section No. 3<br>PLUMBING & DRAINAGE (PROVISIONAL)<br>Bill No. 2<br>SANITARY FITTINGS  |          |      |        |

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

|    |  |    |    |   |
|----|--|----|----|---|
| 4  | Vaal Sanitaryware Cameo ceramic fireclay drop-in vanity basin colour White (Code: 702803WH), overall size 595 x 455 x 205mm with one taphole including chainstay hole and flexible overflow tube attachment (Code: 8784Z000)(basin waste text)(basin waste code prefix)(basin waste code)(basin waste code suffix), fitted into opening in vanity top and sealed with silicone sealant where basin rim meets vanity top. | No | 4  |   |
| 5  | Vaal Sanitaryware Sola 510 ceramic vitreous china medical basins colour white (Code:703700), overall size 510 x 400 x 170mm high, fixed to wall on and including concealed wall bracket (Code: 8448Z0) and sealed with silicone sealant where basin meets wall.  | No | 5  |   |
| 6  | Vaal Sanitaryware 600 x 385 x 380mm Lavatera top inlet white vitreous china wall mounted urinal (Code: 705426WH) including 38mm chromium plated domical grating and chromium plated top inlet spreader (Code: 8542Z000), flush valve (by others - Recommended: Cobra FJ6000), fixed on and including two hanger brackets (Code: 8127Z000).   | No | 1  |   |
|    | <u>"Franke"</u>  |    |    |   |
| 7  | Franke Cascade Model CDX671 Grade 304 18/10 polished stainless steel double bowl inset sink (Code: 1990019), overall size 1360 x 500mm with two 343 x 410 x 157mm deep and 160 x 280 x 139mm deep bowl, fitted onto cupboard (elsewhere specified).  | No | 1  |   |
|    | <b><u>WASTE UNIONS ETC</u></b>   |    |    |   |
|    | <u>"Cobra Watertech"</u>   |    |    |   |
| 8  | "Cobra Ref. 316" sink waste with 70mm diameter flange, 45mm long shank, backnut, plug and chain  | No | 2  |   |
| 9  | Cobra Watertech 32mm chrome plated anti-theft plug with spindle (Code: 309-32).  | No | 10 |   |
| 10 | Cobra Watertech 32mm chrome plated slotted basin waste union (no chain or stay) (Code: 303)  | No | 10 |   |
|    | <b>Carried to Collection</b>   |    |    | R |
|    | Section No. 3<br>PLUMBING & DRAINAGE (PROVISIONAL)<br>Bill No. 2<br>SANITARY FITTINGS  |    |    |   |

**NEW ADDITIONS AND ALTERATIONS  
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**TRAPS ETC**

"Marley"

11 40 x 300mm Sink combination for double bowl with deepseal "P" trap

No

1

"Cobra Watertech"

12 Cobra Watertech 40mm chrome plated bottle trap (Code: 365-50) with 75mm deep re-seal, adjustable telescopic pipe and 50mm outlet.

No

11

**Carried to Collection**

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**NEW ADDITIONS AND ALTERATIONS  
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SANITARY FITTINGS

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|            | <b><u>BILL NO. 3</u></b>  |          |      |        |
|            | <b><u>SANITARY PLUMBING</u></b>   |          |      |        |
|            | For Preambles refer to "Department of Public Works:<br>Specification of material and methods to be used -<br>PW371" |          |      |        |
|            | <b><u>SANITARY PLUMBING</u></b>   |          |      |        |
|            | <u>uPVC, soil and vent pipes</u>  |          |      |        |
| 1          | 50mm Pipes  | m        | 6    |        |
| 2          | 110mm Pipes   | m        | 2    |        |
| 3          | 50mm Pipes chased into brickwork  | m        | 90   |        |
| 4          | 110mm Pipes chased into brickwork   | m        | 12   |        |
| 5          | 50mm Pipes laid in and including trenches not<br>exceeding 1m deep below surface beds                               | m        | 76   |        |
| 6          | 110mm Pipes laid in and including trenches not<br>exceeding 1m deep below surface beds                              | m        | 22   |        |
|            | <u>Extra over uPVC, soil and vent pipes for fittings</u>  |          |      |        |
| 7          | 50mm BSP adaptor  | No       | 11   |        |
| 8          | 50mm Reducer  | No       | 2    |        |
| 9          | 50mm Bend   | No       | 4    |        |
| 10         | 110mm Bend  | No       | 4    |        |
| 11         | 110mm P-trap  | No       | 1    |        |
| 12         | 110mm Pan connector   | No       | 4    |        |
|            | <b>Carried to Collection</b>  |          |      | R      |
|            | Section No. 3<br>PLUMBING & DRAINAGE (PROVISIONAL)<br>Bill No. 3<br>SANITARY PLUMBING                               |          |      |        |

**NEW ADDITIONS AND ALTERATIONS  
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|    |   |    |   |  |
|----|---|----|---|--|
| 13 | 50mm Junction   | No | 1 |  |
| 14 | 110mm Junction  | No | 1 |  |
| 15 | 50mm Access bend  | No | 2 |  |
| 16 | 110 x 50 x 110mm Reducing junction                      | No | 1 |  |
| 17 | 110mm Access bend                                       | No | 1 |  |
| 18 | 50mm Access junction                                    | No | 2 |  |
| 19 | 110mm Access junction                                   | No | 2 |  |
| 20 | 110mm Access bend with anti-syphon horn                 | No | 2 |  |
| 21 | 110 x 110 x 50mm Access reducing junction               | No | 1 |  |
| 22 | 110 x 50 x 110mm Access reducing junction               | No | 1 |  |
| 23 | 110mm Eccentric reducer                                 | No | 3 |  |
| 24 | 110 x 50 x 50mm Double reducing access junction         | No | 1 |  |
| 25 | 110 x 50 x 50mm Double reducing junction                | No | 1 |  |
| 26 | 110mm Access double junction                            | No | 1 |  |
| 27 | 110mm Air vent cowl                                     | No | 1 |  |
| 28 | 110mm GI vent valve                                     | No | 1 |  |
|    | <b><u>Sundries</u></b>                                  |    |   |  |
| 29 | Unreinforced concrete encasing to 50mm horizontal pipe  | m  | 8 |  |
| 30 | Unreinforced concrete encasing to 110mm horizontal pipe | m  | 6 |  |
|    | <b>Carried to Collection</b>                            |    |   |  |
|    | Section No. 3   |    |   |  |
|    | PLUMBING & DRAINAGE (PROVISIONAL)                       |    |   |  |
|    | Bill No. 3  |    |   |  |
|    | SANITARY PLUMBING                                       |    |   |  |

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**SECTION NO. 3**

**BILL NO. 4**

**WATER SUPPLIES**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**SUPPLEMENTARY PREAMBLES**

**"Polycop" polypropylene pipes:**

Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated

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

All pipe diameters are nominal external

**"Polylink" polypropylene pipes:**

Polypropylene pipes 63mm diameter and over shall be class 12 pipes jointed with cast iron "Supraclamp" running joints

Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured

Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double Z joint couplers

**Carried to Collection**

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Section No. 3  
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WATER SUPPLIES

**NEW ADDITIONS AND ALTERATIONS  
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Branch tees shall include flanged and bolted joints to "Polycop" branch pipes in addition and for brass compression male iron to copper straight couplers

Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reducers shall be of sufficient overall length to accommodate same

All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions

All pipe diameters are nominal external

**WATER SUPPLIES**

The following in trenches for pipes (pipes e/m)

|   |  |    |     |
|---|--|----|-----|
| 1 | Excavation not exceeding 2m deep   | m3 | 114 |
| 2 | Risk of collapse to sides of trench and hole excavations not exceeding 1,5m deep   | m2 | 228 |
| 3 | Backfilling to trenches, holes, with materials obtained from excavations compacted in 150mm layers to 90% Mod AASHTO density   | m3 | 63  |
| 4 | Backfilling to trenches, holes, with selected materials obtained from excavations compacted in 150mm layers to 90% Mod AASHTO density to form fill blanket             | m3 | 17  |
| 5 | Backfilling to trenches, holes, with selected materials supplied by the contractor compacted in 150mm layers to 90% Mod AASHTO density to form fill blanket            | m3 | 17  |
| 6 | Backfilling to trenches, holes, with selected granular supplied by the contractor materials compacted in 150mm layers to 90% Mod AASHTO density to form bedding cradle | m3 | 17  |

**Carried to Collection**

Section No. 3  
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**NEW ADDITIONS AND ALTERATIONS  
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|    |  |    |      |   |
|----|--|----|------|---|
| 7  | Extra over all excavations for carting away surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor | m3 | 51   |   |
| 8  | Keeping excavations free of water  |    | Item |   |
|    | <u>Class 12 black HDPE high density polyethylene pipes with and including "Plasson" compression fittings</u>   |    |      |   |
| 9  | 22mm Pipes laid in trenches not exceeding 1m deep (trench e/m)   | m  | 44   |   |
| 10 | 22mm Pipes laid in trenches under floors not exceeding 1m deep (trench e/m)  | m  | 23   |   |
| 11 | 32mm Pipes laid in trenches not exceeding 1m deep (trenches e/m)   | m  | 22   |   |
| 12 | 32mm Pipes laid in trenches under floors not exceeding 1m deep (trenches e/m)  | m  | 25   |   |
|    | <u>Extra over class 12 uPVC pressure pipes for fittings with solvent welded joints</u>   |    |      |   |
| 13 | 32mm Bend  | No | 3    |   |
| 14 | 22mm Fittings  | No | 5    |   |
| 15 | 32mm Elbow   | No | 1    |   |
| 16 | 32mm Tee   | No | 1    |   |
| 17 | 32mm Junction  | No | 1    |   |
| 18 | 32 x 22 x 32mm Reducing junction   | No | 2    |   |
| 19 | 32 x 22mm Reducer  | No | 2    |   |
|    | <u>Class 0 copper pipes</u>  |    |      |   |
| 20 | 15mm Pipes   | m  | 56   |   |
| 21 | 22mm Pipes   | m  | 33   |   |
|    | <b>Carried to Collection</b>   |    |      | R |
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**NEW ADDITIONS AND ALTERATIONS  
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|    |   |    |    |   |
|----|---|----|----|---|
|    | <u>Extra over class 0 copper pipes for capillary fittings</u>   |    |    |   |
| 22 | 15mm Fittings   | No | 32 |   |
| 23 | 22mm Fittings   | No | 11 |   |
|    | <b><u>TAPS, VALVES, ETC</u></b>   |    |    |   |
|    | <u>"Cobra Watertech"</u>  |    |    |   |
| 24 | Cobra Watertech 15mm MI x FI x 50mm long extension piece (Code: 057-15).  | No | 2  |   |
| 25 | Cobra Watertech 15mm chrome plated medical wall mounted medical mixer (Code 515/055H-21) with neck swivel outlet manufactured in accordance with SANS 226:2009 Type 2 (BS 5412).  | No | 5  |   |
| 26 | Cobra Watertech 15mm chrome plated pillar tap (Code: 503-21B) with blue indice and elbow action lever, manufactured in accordance with SANS 226:2009 Type 2 (BS 5412).  | No | 1  |   |
| 27 | Cobra Watertech 15mm BSPT stub taper threaded FI x FI cast brass heavy duty fullway gate valve with non-blowout, non rising spindle, non-asbestos gland packing, guided wedge and red pressed steel hand wheel (Code: 1001-125-15mm). | No | 2  |   |
| 28 | Cobra Watertech Chrome Slimline Junior Flushmaster exposed flush valve (Code: FJS6-000), installed in accordance with the manufacturer's recommendations.   | No | 1  |   |
| 29 | Cobra Watertech chrome plated 15mm diameter outlet x 215mm long with 27mm offset offset urinal flush pipe (Code: FJT5-5).   | No | 1  |   |
| 30 | Cobra Watertech Metering Chrome pillar tap (Code: KM2-100), manufactured in accordance with SANS 1808-9, installed in accordance with the manufacturers recommendations.  | No | 4  |   |
|    | <b>Carried to Collection</b>  |    |    | R |
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**NEW ADDITIONS AND ALTERATIONS  
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|  |  |    |   |  |   |
|--|--|----|---|--|---|
| 31   | Cobra Watertech Star 15mm chrome plated sink mixer (Code: 266-041-10) with aerated swivel spout and concealed connections, manufactured in accordance with SANS 226:2009 Type 1 (BS 5412).   | No | 1 |  |   |
| 32   | Cobra Watertech 22mm C x C cast brass heavy duty fullway gate valve with non-blowout, non rising spindle, non-asbestos gland packing, guided wedge and red pressed steel hand wheel (Code: 1002-125-20mm).   | No | 4 |  |   |
| 33   | Cobra Watertech 15mm angle regulating valve with 10mm bendable copper outlet tube service connection (Code: 232/350).  | No | 9 |  |   |
| <b><u>ELECTRIC WATER HEATERS</u></b>   |  |    |   |  |   |
| <u>"Kwikot"</u>  |  |    |   |  |   |
| 34   | Kwikot 2,5 litre Stainless steel KwikBoil water boiler (Code: KWIKBOIL-2,5-S/S), size 275 x 165 x 365mm high with stainless steel tank, steam free boiling water, electronic controls, 15mm overflow, Stainless Steel drip tray (code: KB-SSTRAY), connected to 15mm cold water supply including isolating valve and 230 volt 1800 watt electrical power supply, plugged and screwed to wall and fitted under 1 year warranty. | No | 1 |  |   |
| <b><u>FIRE APPLIANCES ETC</u></b>  |  |    |   |  |   |
| <u>"Chubb"</u>   |  |    |   |  |   |
| 35   | 9kg Dry chemical powder fire extinguisher, including standard hard wood backing plugged and backing finished with one coat dark stain and two coats clear suede polyurethane varnish   | No | 3 |  |   |
| 36   | "Everyway" hose reel complete with 30m plastic hose, chromium plated stopcock, shut-off nozzle and wall bracket  | No | 1 |  |   |
| <b><u>WATER SUPPLIES TO FIRE APPLIANCES</u></b>                                    |  |    |   |  |   |
| <u>Galvanised steel pipes</u>  |  |    |   |  |   |
| 37   | 25mm Pipes   | m  | 1 |  |   |
| <b>Carried to Collection</b>   |  |    |   |  | R |
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|    |  | No | 1 |   |
|----|--|----|---|---|
| 38 | <u>Extra over galvanised steel pipes for steel fittings</u><br>25mm Fittings |    |   |   |
|    | <b>Carried to Collection</b>   |    |   | R |

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**NEW ADDITIONS AND ALTERATIONS  
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**SECTION NO. 3**

**BILL NO. 5**

**SOIL DRAINAGE**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**SUPPLEMENTARY PREAMBLES**

**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

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

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

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SOIL DRAINAGE



**NEW ADDITIONS AND ALTERATIONS  
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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

**SOIL DRAINAGE**

uPVC Underground drain pipes including couplings in the running lengths

|   |   |    |    |
|---|---|----|----|
| 1   | 110mm Pipes vertically or ramped to cleaning eyes etc (no excavation)                           | m  | 2  |
| 2   | 110mm Pipes laid in and including trenches not exceeding 1m deep                                | m  | 4  |
| 3   | 110mm Pipes laid in and including trenches exceeding 1m and not exceeding 2m deep               | m  | 45 |
| <u>Extra over uPVC pipes for fittings</u>   |   |    |    |
| 4   | 110mm Bend  | No | 3  |
| 5   | 110mm Junction  | No | 2  |
| <u>uPVC gulleys</u>   |   |    |    |
| 6   | 110mm Gully not exceeding 750mm deep, incl of pre-cast concrete surround, excavation etc.       | No | 1  |
| <u>Precast concrete circular inspection chambers, with and including manhole cover and frame, excavations, backfilling etc.</u> |   |    |    |
| 7   | Inspection chamber 1000mm diameter and exceeding 750mm and not exceeding 1000mm deep internally | No | 1  |

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SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

**SUNDRIES**

|   |   |    |   |
|---|---|----|---|
| 8 | 110mm "ABC" cleaning eye end of pipe  | No | 1 |
| 9 | Cutting into existing 110mm drain pipe for and forming junction with 160mm pipe | No | 1 |

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|         | <b><u>BILL NO. 6</u></b>   |          |      |        |
|         | <b><u>WORK IN CONNECTION WITH SECTION BILL 2 TO 5</u></b>  |          |      |        |
|         | <b><u>BUILDER'S WORK</u></b>   |          |      |        |
|         | <u>Builder</u>   |          |      |        |
| 1       | Leave or form opening through one brickwall for pipe n.e 100mm diameter  | No       | 10   |        |
| 2       | Leave or form opening through one brickwall for pipe exceeding 100 and not exceeding 200mm diameter  | No       | 5    |        |
|         | <b><u>TESTING</u></b>  |          |      |        |
| 3       | Provide all necessary water, etc., for and test the whole of the plumbing services, sanitary fittings, pumps, etc., and in stages as deemed necessary, including chlorination, complete to the satisfaction of the architect and the local authority, replace any defective work free of charge, including any necessary re-testing and leave in perfect condition upon completion |          | Item |        |
| 4       | Allow for testing and commisioning the whole of the plumbing services, sanitary fittings, pumps, etc., including any necessary re-setting, etc., for optimal performance of the entire system to duration of the contract, maintenance and guarantee period  |          | Item |        |
|         | <b>Carried Forward to Summary of Section No. 3</b>   |          |      | R      |
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**SECTION 4: SITE WORKS**

**NEW ADDITIONS AND ALTERATIONS  
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| Item No | <b><u>SECTION NO. 4</u></b>   | Quantity | Rate | Amount |
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|         | <b><u>BILL NO 1</u></b>   |          |      |        |
|         | <b><u>EARTHWORKS (PROVISIONAL)</u></b>  |          |      |        |
|         | For Preambles refer to "Department of Public Works: Specification of material and methods to be used - PW371"   |          |      |        |
|         | <b><u>EARTHWORKS</u></b>  |          |      |        |
|         | <b><u>ALTERATIONS</u></b>   |          |      |        |
|         | <b><u>REMOVAL OF EXISTING WORK</u></b>  |          |      |        |
|         | <u>Breaking down and removing brickwork etc</u>   |          |      |        |
| 1       | One and half brick wall including carting away of excavated material to a dumping ground to be located by the contractor  | m2       | 26   |        |
|         | <u>Breaking up and removing mass concrete</u>   |          |      |        |
| 2       | Dig approximately 750mm deep and remove concrete strip footing size approximately 700 x 300mm deep including carting away of excavated material to a dumping ground to be located by the contractor | m        | 18   |        |
| 3       | Dig up and remove manhole size approximately 1500 x 1500 x 700mm deep including carting away of all rubble, debris to a dumping ground located by the contractor                                    | No       | 1    |        |
|         | <b><u>RELOCATION OF SERVICES, ETC.</u></b>  |          |      |        |
|         | Note: Rates for new item associated with re-location and re-connection will be based on items measured in the Plumbing and Drainage Section   |          |      |        |
|         | <b>Carried to Collection</b>  |          |      | R      |
|         | Section No. 4<br>SITE WORKS (PROVISIONAL)<br>Bill No. 1<br>BULK EARTHWORKS  |          |      |        |

**NEW ADDITIONS AND ALTERATIONS  
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|   |  |    |       |   |
|---|--|----|-------|---|
| 4   | Excavate and expose soil drainage pipes, disconnect, plug, and seal, (re-connection and re-location e/m)       | No | 1     |   |
| 5   | Excavate and expose water line, disconnect, plug, and seal, (re-connection and re-location e/m)                | No | 1     |   |
| <b><u>BULK EXCAVATION, FILLING, ETC</u></b>                                   |  |    |       |   |
| <u>Open face excavation in earth over sloping site</u>                        |  |    |       |   |
| 6   | Open face excavation   | m3 | 1,280 |   |
| <u>Extra over bulk excavation in earth for excavation in</u>                  |  |    |       |   |
| 7   | Soft rock  | m3 | 13    |   |
| 8   | Hard rock  | m3 | 26    |   |
| <u>Extra over all excavations for carting away</u>                            |  |    |       |   |
| 9   | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor | m3 | 1,280 |   |
| <u>Risk of collapse of excavations</u>  |  |    |       |   |
| 10  | Sides of bulk excavations not exceeding 1,5m deep  | m2 | 255   |   |
| 11  | Sides of bulk excavations exceeding 1,5m deep  | m2 | 26    |   |
| <u>Keeping excavations free of water</u>                                      |  |    |       |   |
| 12  | Keeping excavations free of all water other than subterranean water  |    | Item  |   |
| <u>Earth filling of G7 material supplied by the contractor not compacted)</u> |  |    |       |   |
| 13  | Over site to form platforms laid in 150mm thick layers (compaction e/m)  | m3 | 1,370 |   |
| <b>Carried to Collection</b>  |  |    |       | R |
| Section No. 4<br>SITE WORKS (PROVISIONAL)<br>Bill No. 1<br>BULK EARTHWORKS    |  |    |       |   |



**NEW ADDITIONS AND ALTERATIONS  
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| <u>Compaction of surfaces</u>  |  |    |     |  |   |
|--|--|----|-----|--|---|
| 14   | Compaction of ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density (layer 1) | m2 | 830 |  |   |
| 15   | Compaction of ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density (layer 2) | m2 | 830 |  |   |
| 16   | Compaction of ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density (Layer 3) | m2 | 830 |  |   |
| 17   | Compaction of ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density (Layer 4) | m2 | 830 |  |   |
| 18   | Compaction of ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density (Layer 5) | m2 | 830 |  |   |
| 19   | Compaction of ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density (Layer 6) | m2 | 830 |  |   |
| <b>Carried to Collection</b>   |  |    |     |  |   |
| Section No. 4<br>SITE WORKS (PROVISIONAL)<br>Bill No. 1<br>BULK EARTHWORKS |  |    |     |  | R |

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|    |   |    |     |   |
|----|---|----|-----|---|
| 20 | Compaction of ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density (Layer 7)  | m2 | 830 |   |
| 21 | Compaction of ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density (Layer 8)  | m2 | 830 |   |
| 22 | Compaction of ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density (Layer 9)  | m2 | 830 |   |
| 23 | Compaction of ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density (Layer 10) | m2 | 830 |   |
| 24 | Compaction of ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density (Layer 11) | m2 | 830 |   |
|    | <u>Prescribed density tests on filling</u>  |    |     |   |
| 25 | "Mod. AASHTO Density" test  | No | 88  |   |
|    | <b>Carried to Collection</b>  |    |     | R |
|    | Section No. 4<br>SITE WORKS (PROVISIONAL)<br>Bill No. 1<br>BULK EARTHWORKS  |    |     |   |

**NEW ADDITIONS AND ALTERATIONS  
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|  |                    |  |               |
|--|--------------------|--|---------------|
| Section No. 4                                      |                    |  |               |
| SITE WORKS (PROVISIONAL)                           |                    |  |               |
| Bill No. 1   |                    |  |               |
| BULK EARTHWORKS                                    |                    |  |               |
| <b><u>COLLECTION</u></b>                           |                    |  |               |
| Total Brought Forward from Page No.                | <b>Page<br/>No</b> |  | <b>Amount</b> |
|  | 120                |  | -----         |
|  | 121                |  | -----         |
|  | 122                |  | -----         |
|  | 123                |  | -----         |
| <b>Carried Forward to Summary of Section No. 4</b> |                    |  | R             |
| Section No. 4                                      |                    |  |               |
| SITE WORKS (PROVISIONAL)                           |                    |  |               |
| Bill No. 1   |                    |  |               |
| BULK EARTHWORKS                                    |                    |  |               |

**NEW ADDITIONS AND ALTERATIONS  
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| Item No | <b><u>SECTION NO. 4</u></b>   | Quantity | Rate | Amount |
|---------|---|----------|------|--------|
|         | <b><u>BILL NO. 2</u></b>  |          |      |        |
|         | <b><u>APRONS AROUND BUILDINGS</u></b>   |          |      |        |
|         | For Preambles refer to "Department of Public Works: Specification of material and methods to be used - PW371"   |          |      |        |
|         | <b><u>EARTHWORKS</u></b>  |          |      |        |
|         | <u>Compaction of surfaces</u>   |          |      |        |
| 1       | Compaction of ground surface under aprons including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density | m2       | 215  |        |
|         | <u>Prescribed density tests on filling</u>  |          |      |        |
| 2       | "Mod. AASHTO Density" test  | No       | 4    |        |
|         | <b><u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>   |          |      |        |
|         | <u>25 MPa/20 mm concrete</u>  |          |      |        |
| 3       | Aprons cast in panels to falls  | m3       | 19   |        |
| 4       | Stormwater channels cast in panels  | m3       | 9    |        |
|         | <b><u>CONCRETE SUNDRIES</u></b>   |          |      |        |
|         | <u>Finishing top surfaces of concrete smooth with a wood float</u>  |          |      |        |
| 5       | Aprons to falls   | m2       | 143  |        |
|         | <b>Carried to Collection</b>  |          |      | R      |
|         | Section No. 4<br>SITE WORKS (PROVISIONAL)<br>Bill No. 2<br>APRONS AND STORMWATER CHANNELS   |          |      |        |

**NEW ADDITIONS AND ALTERATIONS  
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|    |  |    |     |   |
|----|--|----|-----|---|
|    | <u>Grooves, channels, mortices, sinkings, etc. in concrete</u>   |    |     |   |
| 6  | Segmental channel with radius 290mm and minimum depth of 100mm on top of concrete, incl. all excavations, cart away etc.   | m  | 143 |   |
|    | <b><u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u></b>  |    |     |   |
|    | <u>Smooth formwork to sides</u>  |    |     |   |
| 7  | Edges, risers, ends and reveals not exceeding 300mm high or wide   | m  | 287 |   |
|    | <b><u>TEST CUBES</u></b>   |    |     |   |
| 8  | Allow for preparing a set of three (3) concrete strength test cubes, each size 150 x 150 x 150mm, sending them to an approved Testing Laboratory for testing and paying all charges in connection therewith.   | No | 6   |   |
|    | <b><u>MOVEMENT JOINTS ETC</u></b>  |    |     |   |
|    | <u>"Sondor"</u>  |    |     |   |
| 9  | Sondor Performance Foams Jointex low density (33kg/m <sup>3</sup> ), cross linked, closed cell, expanded polyethylene joint former, size 75 x 10mm thick with tear off strip fitted to concrete surface with adhesive as per adhesive manufacturer's recommendation. | m  | 287 |   |
|    | <u>Sika Primer-3N one component epoxy polyurethane based primer for joint sealants (Sikaflex-PRO 2HP and Sikaflex 11FC), applied in accordance with the manufacturer's instructions.</u>   |    |     |   |
| 10 | 10 x 10mm In expansion joints including raking out of expansion joint filler as necessary  | m  | 287 |   |
|    | <b><u>REINFORCEMENT</u></b>  |    |     |   |
|    | <b>Carried to Collection</b>   |    |     |   |
|    | Section No. 4<br>SITE WORKS (PROVISIONAL)<br>Bill No. 2<br>APRONS AND STORMWATER CHANNELS  |    |     | R |

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
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| <u>Fabric reinforcement</u>  |  |   |     |   |
|------------------------------|--|---|-----|---|
| 11                           | Steeledale Mesh standard square fabric mesh, nominal mass 2,45 kg/m <sup>2</sup> with nominal 5,6mm thick wires and 200 x 200mm pitch (Ref 245), complying with SANS 1024/2006 requirements, cut 1000mm wide                               | m | 143 |   |
| 12                           | Steeledale Mesh standard square fabric mesh, nominal mass 2,45 kg/m <sup>2</sup> with nominal 5,6mm thick wires and 200 x 200mm pitch (Ref 245), complying with SANS 1024/2006 requirements cut 500mm wide and shaped to cater for channel | m | 143 |   |
| <b>Carried to Collection</b> |  |   |     | R |

Section No. 4  
SITE WORKS (PROVISIONAL)  
Bill No. 2  
APRONS AND STORMWATER CHANNELS

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Section No. 4

SITE WORKS (PROVISIONAL)

Bill No. 2

APRONS AND STORMWATER CHANNELS

**COLLECTION**

Total Brought Forward from Page No.

**Page  
No**

125

126

127

**Amount**

R

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

Section No. 4

SITE WORKS (PROVISIONAL)

Bill No. 2

APRONS AND STORMWATER CHANNELS

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Item  
No

Quantity      Rate      Amount

**SECTION NO. 4**

**BILL NO. 3**

**RETAINING WALLS**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**SUPPLEMENTARY PREAMBLES**

**Nature of ground**

Use "assumed to be" if no trial holes, soils investigations, etc have been carried out - discuss with engineer. Use "Trial holes indicate that" where the ground has been investigated by means of trial holes

**Nature of ground**

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

**Carting away of excavated material**

Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site

**Carried to Collection**

R

Section No. 4  
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Bill No. 3  
RETAINING WALLS



**NEW ADDITIONS AND ALTERATIONS  
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**Cost of tests**

The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the architect. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the architect. (Test cubes are measured separately)

**Sizes in descriptions**

Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick

**Face bricks**

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

**Pointing**

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

**EXCAVATIONS**

Excavation in earth not exceeding 2m deep

|   |          |    |    |
|---|----------|----|----|
| 1 | Trenches | m3 | 93 |
|---|----------|----|----|

Extra over all excavations for carting away

|   |  |    |    |
|---|--|----|----|
| 2 | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor | m3 | 93 |
|---|--|----|----|

Risk of collapse of excavations

|   |  |    |    |
|---|--|----|----|
| 3 | Sides of trench and hole excavations not exceeding 1,5m deep | m2 | 85 |
|---|--|----|----|

**Carried to Collection**

R

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**NEW ADDITIONS AND ALTERATIONS  
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|    |  |    |      |  |   |
|----|--|----|------|--|---|
| 4  | Sides of trench and hole excavations exceeding 1,5m deep and not exceeding 3m deep   | m2 | 28   |  |   |
|    | <u>Keeping excavations free of water</u>   |    |      |  |   |
| 5  | Keeping excavations free of water  |    | Item |  |   |
|    | <b><u>FILLING ETC</u></b>  |    |      |  |   |
|    | <u>Clean, coarse river sand filling supplied by the contractor, laid in 150mm layers and compacted to 100% Mod Aashto Density test</u>   |    |      |  |   |
| 6  | Under concrete footings for form platforms   | m3 | 16   |  |   |
| 7  | Behind retaining walls   | m3 | 25   |  |   |
| 8  | Backfilling to trenches, holes, etc  | m3 | 18   |  |   |
|    | <u>Compaction of surfaces</u>  |    |      |  |   |
| 9  | Compaction of ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density | m2 | 53   |  |   |
|    | <u>Prescribed density tests on filling</u>   |    |      |  |   |
| 10 | "Mod. AASHTO Density" test   | No | 10   |  |   |
|    | <b><u>SOIL POISONING</u></b>   |    |      |  |   |
|    | <u>Soil insecticide to be executed with SABS compliance by a firm of specialists under a 5 year guarantee</u>  |    |      |  |   |
| 11 | To bottoms and sides of trenches etc   | m2 | 166  |  |   |
|    | <u>Weedkiller mixed in accordance to supplier's specifications</u>   |    |      |  |   |
| 12 | To bottoms and sides of trenches etc   | m2 | 166  |  |   |
|    | <b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b>   |    |      |  |   |
|    | <b>Carried to Collection</b>   |    |      |  | R |
|    | Section No. 4<br>SITE WORKS (PROVISIONAL)<br>Bill No. 3<br>RETAINING WALLS   |    |      |  |   |

**NEW ADDITIONS AND ALTERATIONS  
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|  |  |    |      |   |
|--|--|----|------|---|
| <b><u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>        |  |    |      |   |
|  | <u>15MPa/19mm concrete</u>   |    |      |   |
| 13   | Surface blinding under footings and bases  | m3 | 1    |   |
| <b><u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>          |  |    |      |   |
|  | <u>30MPa/20mm concrete</u>   |    |      |   |
| 14   | Strip footings   | m3 | 8    |   |
| <b><u>REINFORCEMENT</u></b>  |  |    |      |   |
|  | <u>Mild steel reinforcement to structural concrete work</u>  |    |      |   |
| 15   | 10mm Diameter bars   | t  | 0.37 |   |
|  | <u>High tensile steel reinforcement to structural concrete work</u>  |    |      |   |
| 16   | 16mm Diameter bars   | t  | 0.55 |   |
|  | <u>High tensile steel dowel bars</u>   |    |      |   |
| 17   | 16mm Diameter dowel bar 1000mm long with 500mm drilled into (and including drilling) into existing concrete and covered with wet dry epoxy a.b.e epidermix 396 or similar approved and the remaining 500mm length left to join with new concrete | No | 10   |   |
|  | <u>Sundries, etc.</u>  |    |      |   |
| 18   | Prepare and apply wet dry epoxy a.b.e epidermix 396 or similar approved on existing concrete surfaces  | m2 | 0.3  |   |
| <b><u>TEST CUBES</u></b>   |  |    |      |   |
| 19   | Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)   | No | 10   |   |
| <b>Carried to Collection</b>   |  |    |      |   |
| Section No. 4<br>SITE WORKS (PROVISIONAL)<br>Bill No. 3<br>RETAINING WALLS |  |    |      | R |

**NEW ADDITIONS AND ALTERATIONS  
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**MASONRY**

Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar

|    |                                  |    |    |
|----|----------------------------------|----|----|
| 20 | One brick walls                  | m2 | 11 |
| 21 | One brick walls in foundations   | m2 | 4  |
| 22 | 345mm Solid walls                | m2 | 34 |
| 23 | 345mm Solid walls in foundations | m2 | 8  |

**BRICKWORK SUNDRIES**

Brickwork reinforcement

|    |  |   |     |
|----|--|---|-----|
| 24 | 150mm Wide reinforcement built in horizontally | m | 175 |
| 25 | 230mm Wide reinforcement built in horizontally | m | 496 |

Weep holes:

|    |   |    |   |
|----|---|----|---|
| 26 | Leave or form opening through one brickwall for pipe n.e 100mm diameter | No | 8 |
|----|---|----|---|

Protection material, etc.

|    |   |    |    |
|----|---|----|----|
| 27 | 10mm Bitumen impregnated soft board built in vertically against walls as protective barrier | m2 | 57 |
|----|---|----|----|

Bagging of 1:3 cement and sand mixture

|    |   |    |    |
|----|---|----|----|
| 28 | On brick walls, etc.including removing fins, irregularities, etc. | m2 | 57 |
|----|---|----|----|

**FACE BRICKWORK**

**Carried to Collection**

Section No. 4  
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|  |   |    |     |  |
|--|---|----|-----|--|
| 29   | <u>Face bricks pointed with recessed horizontal and flush vertical joints (PC Amount R 10 000-00/1000 Vat exclusive supplied and delivered to site)</u><br>Extra over brickwork for face brickwork  | m2 | 45  |  |
| 30   | <u>Brick-on-edge header course copings, sills, etc of face bricks pointed with recessed joints on all exposed faces (PC Amount R10 000-00/1000 Vat exclusive supplied and delivered to site)</u><br>Coping on top of one brick wall   | m  | 11  |  |
| 31   | Coping on top of 345mm solid brick wall   | m  | 23  |  |
| <b><u>WATERPROOFING</u></b>  |   |    |     |  |
| 32   | <u>Gundle USB Green co ex 250µm damp proof membrane under concrete surface beds to SANS mark 952-1985 type C laid with minimum 150mm overlaps and sealed with Gunplas pressure sensitive tape.</u><br>Wrapped around river sand in trenches   | m2 | 121 |  |
| 33   | <u>Waterproofing to bagged brick retaining walls to be one layer Derbigum CG4 waterproofing membrane, with 100mm side laps and 150mm end laps, sealed to primed surfaces by means of 'torch-fusion', to receive Delta MS8 dimpled drainage (e/m) and protection layer to receive compacted fill (to engineers specification) on top of geo drainage pipe system (elsewhere specified). Waterproofing to be installed by an Approved Derbigum Contractor under a 10-year guarantee.</u><br>On retaining walls surfaces | m2 | 57  |  |
| 34   | <u>"Delta MS8" dimpled water proofing</u><br>On retaining walls surfaces  | m2 | 57  |  |
| 35   | <u>Non-woven geotextile fabric U14 or similar approved</u><br>On retaining walls surfaces   | m2 | 57  |  |
| <b>Carried to Collection</b>   |   |    |     |  |
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**SUBSOIL DRAINAGE**

**SUB-SOIL DRAINAGE**

Stone filling of 19mm broken stone

|    |  |   |    |
|----|--|---|----|
| 36 | 300 x 300mm Box filled with 19mm loose concrete wrapped with Geomesh BSP all in accordance to the Engineer's instructions behind retaining walls | m | 34 |
|----|--|---|----|

uPVC slotted drain pipes, etc.

|    |   |   |    |
|----|---|---|----|
| 37 | 110mm Drain pipes laid in stone encasing (stone encasing e/m) | m | 34 |
|----|---|---|----|

Sand/cement fillet, groves, etc

|    |  |   |    |
|----|--|---|----|
| 38 | 100 x 100mm Smooth corner fillet against brick walls | m | 34 |
|----|--|---|----|

**STORMWATER CHANNELS, ETC.**

**EARTHWORKS**

Excavation in earth not exceeding 2m deep

|    |                                    |    |   |
|----|------------------------------------|----|---|
| 39 | Shallow excavation to form V-drain | m3 | 2 |
|----|------------------------------------|----|---|

|    |                                     |    |    |
|----|-------------------------------------|----|----|
| 40 | Cutting and shaping to form V-drain | m2 | 27 |
|----|-------------------------------------|----|----|

**SOIL POISONING**

Soil insecticide to be executed with SABS compliance by a firm of specialists under a 5 year guarantee

|    |  |    |    |
|----|--|----|----|
| 41 | Under floors etc, including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming | m2 | 27 |
|----|--|----|----|

**Carried to Collection**

Section No. 4  
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**NEW ADDITIONS AND ALTERATIONS  
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|    |  |    |    |   |
|----|--|----|----|---|
|    | <u>Weedkiller mixed in accordance to supplier's specifications</u>   |    |    |   |
| 42 | Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming  | m2 | 27 |   |
|    | <b><u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>  |    |    |   |
|    | <u>25MPa/20mm concrete</u>   |    |    |   |
| 43 | Stormwater channels cast in panels   | m3 | 2  |   |
|    | <u>Grooves, channels, mortices, sinkings, etc. in concrete</u>   |    |    |   |
| 44 | Segmental channel with 50mm depth on top of concrete   | m  | 34 |   |
| 45 | Shaping side of 1200mm wide stormwater channel to form form V shape in the middle  | m  | 34 |   |
|    | <u>Smooth formwork to sides</u>  |    |    |   |
| 46 | Edges, risers, ends and reveals not exceeding 300mm high or wide   | m  | 34 |   |
|    | <b><u>REINFORCEMENT</u></b>  |    |    |   |
|    | <u>Fabric reinforcement</u>  |    |    |   |
| 47 | Steeledale Mesh standard square fabric mesh, nominal mass 1,93 kg/m <sup>2</sup> with nominal 5,6mm thick wires and 200 x 200mm pitch (code 193), complying with SANS 1024/2006 requirements, cut 800mm wide | m  | 34 |   |
|    | <b><u>CONCRETE SUNDRIES</u></b>  |    |    |   |
|    | <u>Finishing top surfaces of concrete smooth with a power float</u>  |    |    |   |
| 48 | Surface beds, slabs, etc   | m2 | 27 |   |
|    | <b>Carried to Collection</b>   |    |    |   |
|    | Section No. 4<br>SITE WORKS (PROVISIONAL)<br>Bill No. 3<br>RETAINING WALLS   |    |    | R |

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Section No. 4

SITE WORKS (PROVISIONAL)

Bill No. 3

RETAINING WALLS

**COLLECTION**

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Section No. 4  
SITE WORKS (PROVISIONAL)  
Bill No. 3  
RETAINING WALLS

R



**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Item  
No

**SECTION NO. 4**

**BILL NO. 4**

**STORMWATER DRAINAGE**

For Preambles refer to "Department of Public Works:  
Specification of material and methods to be used -  
PW371"

**PREAMBLES**

**STORMWATER DRAINAGE**

The following in trenches for pipes (pipes e/m)

| Item No | Description   | Quantity | Rate | Amount |
|---------|---|----------|------|--------|
| 1       | Excavation not exceeding 2m deep  | m3       | 131  |        |
| 2       | Rip and scarify ground level to a depth of 150mm and consolidate to 90% mod. AASHTO density (minimum CBR 3)   | m2       | 88   |        |
| 3       | Risk of collapse to sides of trench and hole excavations not exceeding 1,5m deep  | m2       | 263  |        |
| 4       | Backfilling to trenches, holes, with selected materials obtained from excavations compacted in 150mm layers to 90% Mod AASHTO density to form fill blanket  | m3       | 56   |        |
| 5       | Backfilling to trenches, holes, with selected materials supplied by the contractor compacted in 150mm layers to 90% Mod AASHTO density to form fill blanket | m3       | 26   |        |

**Carried to Collection**

R

Section No. 4  
SITE WORKS (PROVISIONAL)  
Bill No. 4  
STORMWATER DRAINAGE

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

|    |  |    |      |  |   |
|----|--|----|------|--|---|
| 6  | Backfilling to trenches, holes, with selected granular supplied by the contractor materials compacted in 150mm layers to 90% Mod AASHTO density to form bedding cradle | m3 | 35   |  |   |
| 7  | Extra over all excavations for carting away surplus material from excavations and/or stock piles on site to a dumping site n.e 1km from site                           | m3 | 75   |  |   |
| 8  | Keeping excavations free of water  |    | Item |  |   |
|    | <u>Class 100D concrete pipes</u>   |    |      |  |   |
| 9  | 200mm Half round channels in bottoms of inspection chambers  | m  | 3    |  |   |
| 10 | 450mm pipes laid in and including trenches not exceeding 1m deep (trenches e/m)  | m  | 88   |  |   |
|    | <b><u>THE FOLLOWING IN CATCHPITS,<br/>JUNCTION BOXES AND INLET MANHOLES,<br/>ETC.</u></b>  |    |      |  |   |
|    | <b><u>EXCAVATIONS</u></b>  |    |      |  |   |
|    | <u>Excavation in earth not exceeding 2m deep</u>   |    |      |  |   |
| 11 | Excavation in holes not exceeding 2m deep  | m3 | 31   |  |   |
| 12 | Excavation in trenches not exceeding 2m deep (Ground beams)  | m3 | 0.1  |  |   |
| 13 | Reduced levels under floors  | m3 | 0.4  |  |   |
|    | <u>Extra over all excavations for carting away</u>   |    |      |  |   |
| 14 | Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor   | m3 | 11   |  |   |
|    | <b>Carried to Collection</b>   |    |      |  |   |
|    | Section No. 4<br>SITE WORKS (PROVISIONAL)<br>Bill No. 4<br>STORMWATER DRAINAGE   |    |      |  | R |

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

|    |  |    |      |   |
|----|--|----|------|---|
|    | <u>Risk of collapse of excavations</u>   |    |      |   |
| 15 | Sides of trench and hole excavations not exceeding 1,5m deep   | m2 | 46   |   |
| 16 | Sides of trench and hole excavations exceeding 1,5m deep but not exceeding 3m deep   | m2 | 6    |   |
|    | <u>Keeping excavations free of water</u>   |    |      |   |
| 17 | Keeping excavations free of water  |    | Item |   |
|    | <b><u>FILLING ETC</u></b>  |    |      |   |
|    | <u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density</u>  |    |      |   |
| 18 | Backfilling to trenches, holes, etc  | m3 | 20   |   |
|    | <u>Compaction of surfaces</u>  |    |      |   |
| 19 | Compaction of ground surface under stormwater catchpits floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density | m2 | 18   |   |
| 20 | Compaction of ground surface under stormwater outlet floors including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density        | m2 | 2    |   |
|    | <u>Prescribed density tests on filling</u>   |    |      |   |
| 21 | "Modified AASHTO Density" test   | No | 12   |   |
|    | <b><u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>  |    |      |   |
|    | <u>15MPa/19mm concrete</u>   |    |      |   |
| 22 | Surface blinding under footings and bases  | m3 | 0.32 |   |
|    | <b>Carried to Collection</b>   |    |      |   |
|    | Section No. 4<br>SITE WORKS (PROVISIONAL)<br>Bill No. 4<br>STORMWATER DRAINAGE   |    |      | R |

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

**REINFORCED CONCRETE CAST AGAINST  
EXCAVATED SURFACES**

25MPa/19mm concrete

|    |  |    |      |
|----|--|----|------|
| 23 | Ground beams   | m3 | 0.1  |
| 24 | Bottoms of catchpits, etc.   | m3 | 0.96 |
| 25 | Stormwater catchpit slabs, etc.  | m3 | 0.87 |
| 26 | Benching tapering on sides from 170mm to 100mm in stormwater channels 1000mm wide with smooth finishing on top, etc. | m2 | 3    |
| 27 | Stormwater outlet slab, etc.   | m3 | 0.4  |

**TEST CUBES**

|    |  |    |    |
|----|--|----|----|
| 28 | Allow for preparing a set of three (3) concrete strength test cubes, each size 150 x 150 x 150mm, sending them to an approved Testing Laboratory for testing and paying all charges in connection therewith. | No | 12 |
|----|--|----|----|

**SMOOTH FORMWORK (DEGREE OF  
ACCURACY II)**

Smooth formwork to sides

|    |  |   |    |
|----|--|---|----|
| 29 | Edges, risers, ends and reveals not exceeding 300mm high or wide | m | 24 |
|----|--|---|----|

Permanent formwork to soffits

|    |                                      |    |   |
|----|--------------------------------------|----|---|
| 30 | Slab over stormwater catchpits, etc. | m2 | 6 |
|----|--------------------------------------|----|---|

Smooth formwork to form

|    |   |    |   |
|----|---|----|---|
| 31 | Opening for stormwater catchpit size 450 x 450mm through 150mm slab | No | 3 |
|----|---|----|---|

**REINFORCEMENT**

**Carried to Collection**

Section No. 4  
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STORMWATER DRAINAGE

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**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

|    |  |    |     |   |
|----|--|----|-----|---|
|    | <u>Fabric reinforcement</u>  |    |     |   |
| 32 | Steeledale Mesh standard square fabric mesh, nominal mass 1,93 kg/m <sup>2</sup> with nominal 5,6mm thick wires and 200 x 200mm pitch (code 193), complying with SANS 1024/2006 requirements, in sheets 2,4 x 6m long (top slab of catchpit)     | m2 | 13  |   |
| 33 | Steeledale Mesh standard square fabric mesh, nominal mass 1,93 kg/m <sup>2</sup> with nominal 5,6mm thick wires and 200 x 200mm pitch (code 193), complying with SANS 1024/2006 requirements, in sheets 2,4 x 6m long (bottom of catchpit slab). | m2 | 13  |   |
|    | <b><u>CONCRETE SUNDRIES</u></b>  |    |     |   |
|    | <u>Finishing top surfaces of concrete smooth with a wood float/steel trowel</u>  |    |     |   |
| 34 | Bottom of stormwater catchpits, etc.   | m2 | 6   |   |
| 35 | Surfaces of storm water catchpits, etc.  | m2 | 6   |   |
| 36 | Surfaces of stormwater outlets, etc.   | m2 | 2   |   |
|    | <b><u>MASONRY</u></b>  |    |     |   |
|    | <u>Brickwork of NFP bricks in class II mortar</u>  |    |     |   |
| 37 | One brick walls (stormwater catchpit)  | m2 | 22  |   |
| 38 | One brick walls (stormwater outlet)  | m2 | 2   |   |
|    | <b><u>BRICKWORK SUNDRIES</u></b>   |    |     |   |
|    | <u>Brickwork reinforcement</u>   |    |     |   |
| 39 | 150mm Wide reinforcement built in horizontally   | m  | 304 |   |
|    | <b>Carried to Collection</b>   |    |     | R |
|    | Section No. 4<br>SITE WORKS (PROVISIONAL)<br>Bill No. 4<br>STORMWATER DRAINAGE   |    |     |   |

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

|  |   |    |     |   |
|--|---|----|-----|---|
| <u>Holes</u>   |   |    |     |   |
| 40   | Leave or form opening through one brickwall for pipe exceeding 400mm and n.e 500mm diameter   | No | 7   |   |
| <b><u>EXTERNAL PLASTER</u></b>   |   |    |     |   |
| <u>Cement plaster on brickwork</u>   |   |    |     |   |
| 41   | On walls  | m2 | 20  |   |
| 42   | On narrow widths  | m2 | 0.3 |   |
| 43   | On raking narrow widths   | m2 | 1   |   |
| <b><u>COVERS, ETC.</u></b>   |   |    |     |   |
| <u>Gratings, covers, etc</u>   |   |    |     |   |
| 44   | 450 x 450mm Stormwater catchpit grating with frame formed of 50 x 50 x 6mm angle iron, fixed to wall with fixing lugs welded to angle iron and fixed to walls (PC Amount R1 500-00 Vat each supplied) | No | 3   |   |
| <b><u>WATER DISSIPATION BLOCKS, ETC</u></b>                                    |   |    |     |   |
| <u>Kerbs, etc</u>  |   |    |     |   |
| 45   | Precast concrete figure 7 kerb (SABS 927) cut in 300mm long block and fixed in concrete slabs as water dissipation blocks   | No | 11  |   |
| <b>Carried to Collection</b>   |   |    |     |   |
| Section No. 4<br>SITE WORKS (PROVISIONAL)<br>Bill No. 4<br>STORMWATER DRAINAGE |   |    |     | R |

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Section No. 4

SITE WORKS (PROVISIONAL)

Bill No. 4

STORMWATER DRAINAGE

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SITE WORKS (PROVISIONAL)

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STORMWATER DRAINAGE





## **SECTION 5: PROVISIONAL SUMS**

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Item  
No

**SECTION NO. 5**

**BILL NO. 1**

**PROVISIONAL AMOUNTS ETC**

**PROVISIONAL SUMS FOR SELECTED SUB-  
CONTRACT WORKS**

**SUPPLEMENTARY PREAMBLES**

General

All prime cost amounts and provisional sums are net and include for delivery to site of all articles concerned

Sub contractors will be treated as domestic sub contractors for the purpose of this contract. They shall be selected sub contractors and the main contractor will be afforded the opportunity to reject such sub contractors prior to appointment provided reasonable justification is given

Profit

Where stated, the contractor may allow for profit if required

General attendance upon selected sub-contractors

The item "Attendance" which follows each provisional sum for selected sub-contractors work, shall be deemed to cover all the contractor's costs incurred in providing free of charge to the selected sub-contractors, the following:

1. The services as in clause B7 of the Preliminaries
2. Making good in all trades and cleaning down and removal of rubbish on completion

**Carried to Collection**

Section No. 5  
PROVISIONAL SUMS  
Bill No. 1  
PROVISIONAL SUMS

Quantity

Rate

Amount

R

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Preliminaries

The contractor is referred to the Preliminaries for further amplification of "Prime Cost Amounts and Provisional Amounts"

Air conditioning, etc.

- 1 Provide the sum of R200 000-00 (two hundred thousand rand) for the supply and installation of Air conditioning by Specialists (First Fix)
- 2 Allow for giving every facility to Specialists as described
- 3 Allow for profit on above if required

Item

200,000.00

Item

Item

Electrical Installation

- 4 Provide the sum of R600 000-00 (Six hundred thousand rand) for Electrical Installation by Specialists
- 5 Allow for giving every facility to Specialists as described
- 6 Allow for profit on above if required

Item

600,000.00

Item

Item

Fire Detection

- 7 Provide the sum of R110 000-00 (one hundred and ten thousand rand) for Fire detection installation by Specialists
- 8 Allow for giving every facility to Specialists as described
- 9 Allow for profit on above if required

Item

110,000.00

Item

Item

**Carried to Collection**

R

Section No. 5  
PROVISIONAL SUMS  
Bill No. 1  
PROVISIONAL SUMS

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

|   |   |      |            |
|---|---|------|------------|
| <u>Joinery Fittings Installation</u>                                |   |      |            |
| 10  | Provide the sum of R50 000,00 (fifty thousand rand) for the supply and installation of Joinery fittings by Specialists                              | Item | 50,000.00  |
| 11  | Allow for giving every facility to Specialists as described   | Item |            |
| 12  | Allow for profit on above if required   | Item |            |
| <u>Window Blinds, etc.</u>  |   |      |            |
| 13  | Provide the sum of R100 000,00 (one hundred thousand rand) for the supply and installation of Window blinds by Specialists                          | Item | 100,000.00 |
| 14  | Allow for giving every facility to Specialists as described   | Item |            |
| 15  | Allow for profit on above if required   | Item |            |
| <u>Timber Roof Construction</u>                                     |   |      |            |
| 16  | Provide sum of R275 000.00 (two hundred and seventy five thousand rand) for the supply and installation of Timber Roof by Specialists               | Item | 275,000.00 |
| 17  | Allow for profit on above if required (Excluded from CPAP)  | Item |            |
| 18  | Allow for giving every facility to specialist as described  | Item |            |
| <u>Ablutions vanity slabs, etc.</u>                                 |   |      |            |
| 19  | Provide the sum of R75 000,00 (Seventy five thousand rand) for the supply and installation of change rooms vanity slabs and cabinets by Specialists | Item | 75,000.00  |
| <b>Carried to Collection</b>  |   |      |            |
| Section No. 5<br>PROVISIONAL SUMS<br>Bill No. 1<br>PROVISIONAL SUMS |   |      | R          |

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

20 Allow for profit on above if required (Excluded from CPAP)

Item

21 Allow for giving every facility to Specialist as described

Item

**Carried to Collection**

R

Section No. 5  
PROVISIONAL SUMS  
Bill No. 1  
PROVISIONAL SUMS

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

Section No. 5

PROVISIONAL SUMS

Bill No. 1

PROVISIONAL SUMS

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PROVISIONAL SUMS  
Bill No. 1  
PROVISIONAL SUMS

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**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

| Item No | <u>SECTION NO 5</u>   | Quantity | Rate | Amount |
|---------|---|----------|------|--------|
|         | <u>BILL NO 2</u>  |          |      |        |
|         | <u>PROVISIONAL AMOUNTS ETC</u>  |          |      |        |
|         | <u>PROVISIONAL SUMS FOR SELECTED SUB-CONTRACT WORKS</u>                                     |          |      |        |
|         | <u>HOLES THROUGH WALLS</u>  |          |      |        |
|         | <u>Holes</u>  |          |      |        |
| 1       | Leave or form opening through one brickwall for pipe n.e 100mm diameter                     | No       | 2    |        |
| 2       | Leave or form opening through one brickwall for pipe exceeding 100mm and n.e 200mm diameter | No       | 2    |        |
|         | <u>SLEEVES</u>  |          |      |        |
|         | <u>Plastic sleeves for pipes not exceeding 100mm diameter</u>                               |          |      |        |
| 3       | Sleeve not exceeding 250mm long   | No       | 2    |        |
| 4       | Sleeve exceeding 250mm and not exceeding 500mm long   | No       | 2    |        |
|         | <u>Plastic sleeves for pipes exceeding 100mm and not exceeding 200mm diameter</u>           |          |      |        |
| 5       | Sleeve not exceeding 250mm long   | No       | 2    |        |
| 6       | Sleeve exceeding 250mm and not exceeding 500mm long   | No       | 6    |        |
|         | <b>Carried Forward to Summary of Section No. 5</b>  |          |      | R      |
|         | Section No. 5<br>PROVISIONAL SUMS<br>Bill No. 2<br>BUILDER'S WORK                           |          |      |        |





# **FINAL SUMMARY**

**NEW ADDITIONS AND ALTERATIONS  
TO THE EXISTING NURSING SCIENCE  
SIMULATION BUILDING AT THE UNIVERSITY OF VENDA**

| Section No | <u>FINAL SUMMARY</u>  | Page No | Amount     |
|------------|---|---------|------------|
| 1          | PRELIMINARIES AND GENERAL   | 30      |            |
| 2          | BUILDINGS (PROVISIONAL)   | 96      |            |
| 3          | PLUMBING & DRAINAGE (PROVISIONAL)   | 119     |            |
| 4          | SITE WORKS (PROVISIONAL)  | 145     |            |
| 5          | PROVISIONAL SUMS  | 152     |            |
|            | Sub Total - 1   |         | R          |
|            | <b><u>CONTINGENCY SUM</u></b>   |         |            |
|            | Allow the amount of R200 000-00 (Two hundred thousand rand) for Contingencies for building work, to be used as directed by the Principal Agent and deducted in whole or in part if not required | Item    | 200,000.00 |
|            | <b><u>SPECIAL CONDITIONS</u></b>  |         |            |
|            | Provide the sum of R200 000,00 (Two hundred thousand rand) for fluctuations in cost   | Item    | 200,000.00 |
|            | Sub total - 2 (VAT excl)  |         | R          |
|            | Tax   |         | R          |
|            | Sub Total (VAT INCL.) CARRIED TO TENDER FORM  |         | R          |
|            | <b>Carried to Form of Tender</b>  |         | R          |

**ARCHITECT'S DRAWINGS**