

Item No	Quantity	Rate	Amount
<u>SECTION NO. 1: PRELIMINARIES</u> <u>BILL NO. 1</u> <u>PRELIMINARIES</u> <u>Disclaimer</u> <i>While the ASQAS aims to ensure that its publications represent best practice, the ASQAS does not accept or assume any liability or responsibility for any events or consequences which derive from the use of the Preliminaries Model Bill. Such Model Bill is not exhaustive and is therefore only intended to provide general guidance to those who wish to make use of it. This publication is provided "as is" without warranty of any kind, either expressed or implied including but without limitation to warranties of merchantability, fitness for a particular purpose and non-infringement</i> <u>User note</u> <i>Delete the above "Disclaimer" when preparing this Bill No. 1 for tender or contract purposes</i> <u>BUILDING AGREEMENT AND PRELIMINARIES</u> The JBCC Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described The JBCC Principal Building Agreement contract data form an integral part of this agreement The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these bills of quantities, amended as hereinafter described The contractor is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only Carried to Collection Section No. 1 Bill No. 1 Preliminary and General ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT			
		R	

Where any item is not relevant to this **agreement** such item is marked N/A signifying "not applicable"

Where standard clauses or alternatives are not entirely applicable to this **agreement** such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the abovementioned documents

PREAMBLES FOR TRADES

User note

*The General Preambles for Trades 2017 published by the Association of South African Quantity Surveyors is designed to support and extend the abbreviated descriptions utilised in these bills of quantities by inter alia referring to SANS construction standards. **Where such preambles are not applicable** (eg where BS or Euro construction standards are applicable or the design consultants provide other preambles/specifications for insertion), users are to ensure that the abbreviated descriptions when read in conjunction with the Standard System of Measuring Building Work (seventh edition) for works within South Africa or the Standard Method of Measuring Building Work for Africa 2015 (first edition) for works elsewhere in Africa, represent the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications*

Note that the text of the Standard System of Measuring Building Work (seventh edition) and that of the Standard Method of Measuring Building Work for Africa 2015 (first edition) is the same

The latest version of the General Preambles for Trades should be referred to should the General Preambles for Trades 2017 be revised in future

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

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Supplementary preambles and/or specifications are incorporated in these **bills of quantities** to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the General Preambles

The **contractor's** prices for all items throughout these **bills of quantities** shall take account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications

STRUCTURE OF THIS PRELIMINARIES BILL

Section A : A recital of the headings of the individual clauses in the aforementioned **JBCC** Principal Building Agreement

Section B : A recital of the headings of the individual clauses in the aforementioned **JBCC** General Preliminaries

Section C : Any special clauses to meet the particular circumstances of the project

PRICING OF PRELIMINARIES

Should the **contractor** select Option A in the **contract data** for the adjustment of **preliminaries**, the amounts entered against the relevant items in these **preliminaries** are to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T)

SECTION A: PRINCIPAL BUILDING AGREEMENT

Interpretation (A1-A7)

1 Clause 1.0 - Definitions and interpretation

Pricing of bills of quantities

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The **contractor** is to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the standard system of measurement), patterns, models and templates, plant, temporary works, returning of packaging, duties, taxes (other than Value Added Tax), imposts, establishment charges, overheads, profit and all other obligations arising out of this **agreement**. Value Added Tax (VAT) is to be separately stated on the summary page of these **bills of quantities**

Items left unpriced will be deemed to be covered in prices against other items throughout these **bills of quantities** and no claim for any extras arising out of the **contractor's** omission to price any item will be entertained

Prices for all **construction equipment**, temporary works, services and other items shall include for the supply, maintenance, operating cost and subsequent removal and making good as necessary

Abbreviated descriptions

The items in these **bills of quantities** utilise abbreviated descriptions. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or specifications. However, should the full intent and meaning of any description not be clear, the **contractor** shall, before submission of his tender, call for a written directive from the **principal agent**, failing which it shall be assumed that the **contractor** has allowed in his pricing for materials and workmanship in terms of international best practice

Legal status of contractor

If the **contractor** constitutes a joint venture, consortium or other unincorporated grouping of two or more persons then:

1. These persons are deemed to be jointly and severally liable to the **employer** for the performance of this **agreement**

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2.	These persons shall notify the employer of their leader who has assigned authority to bind the contractor and each of these persons			
3.	The contractor shall not alter its composition or legal status without the prior written consent of the employer			
	F:..... V:..... T:.....	Item		
2	Clause 2.0 - Law, regulations and notices			
	<u>User note</u>			
3	Clause 3.0 - Offer and acceptance			
	F:..... V:..... T:.....		Item	
4	Clause 4.0 - Cession and assignment			
	F:..... V:..... T:.....		Item	
5	Clause 5.0 - Documents			
	Value Added Tax			
	Provision is made in the summary page of these bills of quantities for the inclusion of Value Added Tax (VAT)			
	Priced document as specification			
	Clause 5.4 is deemed to be deleted			
	The principal agent shall decide which portion of the priced document may be used as a specification of materials and goods or methods, if any			
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User note

Insert the following where applicable

Electronic issue of drawings

All drawings for this project will be issued electronically and the **contractor** shall be deemed to have received such drawings on the date that such drawings have been dispatched electronically [5.6]

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

T:.....

Item

6 Clause 6.0 - **Employer's agents**

User note

Delegated authority may be dealt with in B 5.0 of the contract data. Insert in the contract data "Refer to Bill No. 1 (Preliminaries)" should it be dealt with in Bill No. 1

The authority of the **principal agent** to issue **contract instructions** [17.1] and perform duties for specific aspects of the **works** is delegated to **agents** as follows [6.2]. This does not preclude the **principal agent** from issuing such **contract instructions**:

User note

Insert the following but remove where the consultant is not relevant to this agreement. Edit both the duties and the contract instructions of the consultant in keeping with the wishes of the principal agent

Note that the contract instructions hereinafter are selected from those listed in clause 17.1 of the JBCC PBA

1.1 Duties [6.2] :

The architect is responsible for the architectural design, functional design and quality inspection of the **works**

1.2 **Contract instructions** [6.2; 17.1] :

1.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the **agreement** other than in the **JBCC** Principal Building Agreement

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1.2.2	Alteration to design, standards or quantity of the works provided that such contract instructions shall not substantially change the scope of the works			
1.2.3	The site [13.0]			
1.2.4	Compliance with the law , regulations and bylaws [2.1]			
1.2.5	Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works			
1.2.6	Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]			
1.2.7	Removal or re-execution of work			
1.2.8	Removal or substitution of any materials and goods			
1.2.9	Protection of the works			
1.2.10	Making good physical loss and repairing damage to the works [23.2.2]			
1.2.11	Rectification of defects [21.2]			
1.2.12	A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion , a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion			
1.2.13	Expenditure of budgetary allowances, prime cost amounts and provisional sums			
1.2.14	Appointment of a subcontractor [14.0; 15.0]			
1.2.15	Work by direct contractors [16.0]			
1.2.16	On suspension or termination, protection of the works , removal of construction equipment and surplus materials and goods [29.0]			
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User note

2.1 Duties [6.2] :

The quantity surveyor is responsible for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions of the **works**

2.2 **Contract instructions** [6.2; 17.1] :

2.2.1 No **contract instructions** delegated to the quantity surveyor

User note

Note that the contract instructions hereinafter are selected from those listed in clause 17.1 of the JBCC PBA

3.1 Duties [6.2] :

The civil and structural engineer is responsible for all aspects of civil and structural engineering design and quality inspection of the **works**

3.2 **Contract instructions** [6.2; 17.1] :

3.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the **agreement** other than in the **JBCC** Principal Building Agreement

3.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

3.2.3 The **site** [13.0]

3.2.4 Compliance with the **law**, regulations and bylaws [2.1]

3.2.5 Provision and testing of samples of **materials and goods** and/or of finishes and assemblies of elements of the **works**

3.2.6 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]

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- 3.2.7 Removal or re-execution of work
- 3.2.8 Removal or substitution of any **materials and goods**
- 3.2.9 Protection of the **works**
- 3.2.10 Making good physical loss and repairing damage to the **works** [23.2.2]
- 3.2.11 Rectification of **defects** [21.2]
- 3.2.12 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion**, a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**
- 3.2.13 Expenditure of **budgetary allowances, prime cost amounts** and **provisional sums**

User note

Note that the contract instructions hereinafter are selected from those listed in clause 17.1 of the JBCC PBA

4.1 Duties [6.2] :

The mechanical engineer is responsible for all aspects of mechanical engineering design and quality inspection of the **works** ? and, where appointed by the **employer** for quantity surveying services in respect of the mechanical installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions

4.2 **Contract instructions** [6.2; 17.1] :

- 4.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the **agreement** other than in the **JBCC** Principal Building Agreement
- 4.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

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- 4.2.3 Compliance with the **law**, regulations and bylaws [2.1]
- 4.2.4 Provision and testing of samples of **materials and goods** and/or of finishes and assemblies of elements of the **works**
- 4.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]
- 4.2.6 Removal or re-execution of work
- 4.2.7 Removal or substitution of any **materials and goods**
- 4.2.8 Protection of the **works**
- 4.2.9 Making good physical loss and repairing damage to the **works** [23.2.2]
- 4.2.10 Rectification of **defects** [21.2]
- 4.2.11 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion**, a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**
- 4.2.12 Expenditure of **budgetary allowances, prime cost amounts** and **provisional sums**

User note

Note that the contract instructions hereinafter are selected from those listed in clause 17.1 of the JBCC PBA

5.1 Duties [6.2] :

The electrical engineer is responsible for all aspects of electrical engineering design and quality inspection of the **works** ? and, where appointed by the **employer** for quantity surveying services in respect of the electrical installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions

5.2 **Contract instructions** [6.2; 17.1] :

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- 5.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the **agreement** other than in the **JBCC** Principal Building Agreement
- 5.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**
- 5.2.3 Compliance with the **law**, regulations and bylaws [2.1]
- 5.2.4 Provision and testing of samples of **materials and goods** and/or of finishes and assemblies of elements of the **works**
- 5.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]
- 5.2.6 Removal or re-execution of work
- 5.2.7 Removal or substitution of any **materials and goods**
- 5.2.8 Protection of the **works**
- 5.2.9 Making good physical loss and repairing damage to the **works** [23.2.2]
- 5.2.10 Rectification of **defects** [21.2]
- 5.2.11 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion**, a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**
- 5.2.12 Expenditure of **budgetary allowances, prime cost amounts** and **provisional sums**

User note

Note that the contract instructions hereinafter are selected from those listed in clause 17.1 of the JBCC PBA

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6.1 Duties [6.2] :

The wet services engineer is responsible for all aspects of wet services engineering design and quality inspection of the **works**

6.2 **Contract instructions** [6.2; 17.1] :

6.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the **agreement** other than in the **JBCC** Principal Building Agreement

6.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

6.2.3 Compliance with the **law**, regulations and bylaws [2.1]

6.2.4 Provision and testing of samples of **materials and goods** and/or of finishes and assemblies of elements of the **works**

6.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]

6.2.6 Removal or re-execution of work

6.2.7 Removal or substitution of any **materials and goods**

6.2.8 Protection of the **works**

6.2.9 Making good physical loss and repairing damage to the **works** [23.2.2]

6.2.10 Rectification of **defects** [21.2]

6.2.11 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion**, a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**

6.2.12 Expenditure of **budgetary allowances, prime cost amounts** and **provisional sums** ?

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User note

Note that the contract instructions hereinafter are selected from those listed in clause 17.1 of the JBCC PBA

7.1 Duties [6.2] :

The fire consultant is responsible for all aspects of rational fire design and quality inspection of the **works**

7.2 **Contract instructions** [6.2; 17.1] :

7.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the **agreement** other than in the **JBCC** Principal Building Agreement

7.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

7.2.3 Compliance with the **law**, regulations and bylaws [2.1]

7.2.4 Provision and testing of samples of **materials and goods** and/or of finishes and assemblies of elements of the **works**

7.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]

7.2.6 Removal or re-execution of work

7.2.7 Removal or substitution of any **materials and goods**

7.2.8 Protection of the **works**

7.2.9 Making good physical loss and repairing damage to the **works** [23.2.2]

7.2.10 Rectification of **defects** [21.2]

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7.2.11 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion**, a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**

7.2.12 Expenditure of **budgetary allowances, prime cost amounts** and **provisional sums** ?

? 8. Health and safety consultant

User note

8.1 Duties [6.2] :

The health and safety consultant is responsible for all aspects of health and safety of the **works**. Without derogating from the generality thereof, the health and safety consultant will perform the following specific functions and duties in respect of the health and safety aspects of the **works**. He shall:

8.1.1 Act as the **employer's agent** in terms of the Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993 as amended

8.1.2 Prepare and update the health and safety specification for the **works**

8.1.3 Agree with the **contractor** the health and safety plan for the **works**

8.1.4 Carry out regular audits to ensure adherence to the safety plan and compliance with the act and regulations

8.1.5 Stop the execution of the **works** where the agreed specification or plan is not adhered to?

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

Item

7 Clause 7.0 - Design responsibility

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

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<u>Insurances and securities (A8-A11)</u>			
8	Clause 8.0 - Works risk F:..... V:..... T:.....	Item	
9	Clause 9.0 - Indemnities F:..... V:..... T:.....	Item	
10	Clause 10.0 - Insurances F:..... V:..... T:.....	Item	
11	Clause 11.0 - Securities <u>User note</u> <i>If it is deemed advisable, the <u>extent</u> of any guarantee for payment may be stated and whether it is required of the contractor to waive his lien. Edit the following clause:</i> <u>User note</u> <i>Where it is expected of the contractor to waive his lien in terms of clause 11.10, the waiver of lien may be extended to subcontracts as follows:</i> Extension of waiver of lien The contractor shall ensure that a waiver of lien is included in all subcontracts and that the works executed on the site are kept free of all liens and other encumbrances at all times [11.10] ? F:..... V:..... T:..... <u>Execution (A12 - A17)</u>	Item	
12	Clause 12.0 - Obligations of the parties		
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Office accommodation

The **contractor** shall provide, maintain and remove on **practical completion** air conditioned office accommodation with suitable tables and chairs for meetings to be held on the **site**. Such offices shall be kept clean and fit for use at all times [12.2.18]

Notice board

The **contractor** shall erect in a position approved by the **principal agent**, maintain and remove on **practical completion** a notice board recommended by the South African Institute of Architects and as approved by the **principal agent** listing the names and logos of the **employer**, the **contractor** and the professional consultants. No subcontractor or supplier notice boards may be erected unless permission is granted by the **principal agent** for such notice boards to be erected [12.2.18]

Statutory and other notices

The **contractor** shall submit and/or comply with all statutory and other notices that may be required by any local or other authority in order not to cause any delay to the commencement of the **works** by the **contractor**. The **contractor** shall pay all deposits or fees in this regard

It is, however, specifically recorded that the **employer** shall be responsible for the timeous approval of building plans by any local or other authorities and the payment of any fees or charges related thereto

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

Item

13 Clause 13.0 - Setting out

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

Item

14 Clause 14.0 - Nominated **subcontractors**

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

Item

15 Clause 15.0 - Selected **subcontractors**

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	F:..... V:..... T:.....	Item	
16	Clause 16.0 - Direct contractors Attendance on direct contractors In respect of direct contractors the contractor shall: 1. Designate an area for the direct contractor to establish a temporary office and workshop and storage of equipment and materials 2. Allow the use of personnel welfare facilities, where provided 3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation 4. Permit the direct contractor to use erected scaffolding, hoisting facilities, etc provided by the contractor, in common with others having the like right, while it remains erected on the site [16.1] F:..... V:..... T:.....	Item	
17	Clause 17.0 - Contract instructions ? Site instructions Instructions issued on site are to be recorded in a site instruction book which is to be supplied and maintained on site by the contractor ? F:..... V:..... T:..... <u>Completion (A18 - A24)</u>	Item	
18	Clause 18.0 - Interim completion	N/A	
19	Clause 19.0 - Practical completion F:..... V:..... T:.....	Item	
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20	Clause 20.0 - Completion in sections F:..... V:..... T:.....	Item		
21	Clause 21.0 - Defects liability period and final completion F:..... V:..... T:.....	Item		
22	Clause 22.0 - Latent defects liability period F:..... V:..... T:.....	Item		
23	Clause 23.0 - Revision of the date for practical completion Substitution of materials and goods The removal or substitution of any materials and goods which do not conform to the specification or the contract drawings shall not constitute grounds for the extension of the construction period nor for the adjustment of the contract value [17.1.8; 23.1 & 2] F:..... V:..... T:.....	Item		
24	Clause 24.0 - Penalty for late or non-completion F:..... V:..... T:..... Payment (A25 - A27)	Item		
25	Clause 25.0 - Payment Prices submitted Where prices are submitted by the contractor or subcontractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of this agreement and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the certificate of final completion, it shall be in writing			
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26	Clause 26.0 - Adjustment of the contract value and final account Fluctuations in costs All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the contractor [26.9.5] <u>User note</u> Should the contractor be instructed to do so he shall execute this work under the conditions pertaining to this agreement on the basis that a separate amount for preliminaries appurtenant to this work (if applicable) is agreed to between the contractor and the principal agent and on condition that instruction to proceed with such work is given to him within a period of three (3) calendar months after the date of practical completion of the works The employer reserves the right to omit such work without compensation to the contractor for loss of profit or any other loss which the contractor may suffer as a result of such omission ? Cost of claims All costs incurred by the contractor in the preparation of claims shall be borne by the contractor. This provision shall not preclude an adjudicator or an arbitrator appointed in terms of this agreement [30.6 & 7] from making a determination on costs Claims from subcontractors The contractor shall review, assess and adjudicate any claims received by him from any subcontractor and thereafter submit same to the principal agent with a recommendation in order to assist the principal agent in adjudicating the claim [26.6] F:..... V:..... T:.....	Item		
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27	Clause 27.0 - Recovery of expense and/or loss F:..... V:..... T:..... <u>Suspension and termination (A28 - A29)</u>	Item	
28	Clause 28.0 - Suspension by the contractor F:..... V:..... T:.....	Item	
29	Clause 29.0 - Termination F:..... V:..... T:..... <u>Dispute resolution (A30)</u>	Item	
30	Clause 30.0 - Dispute resolution F:..... V:..... T:.....	Item	
31	<u>Agreement</u> The required information of the parties and the amount of the contract sum shall be inserted in the agreement for signature of the agreement by the parties F:..... V:..... T:.....	Item	
32	<u>Contract data</u> <u>User note</u> <i>Insert under the above heading, with suitable sub-headings, any amendments, modifications, corrections or supplements to the contract data</i> Tenderer's selections Before submission of his tender the contractor is to complete the tenderer's selections in the contract data		
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User note

All information for the above requires consultation with the contractor. The principal agent should not pre-select any of the alternatives available to the contractor

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

Item

SECTION B: GENERAL PRELIMINARIES

User note

Amendments, modifications, corrections or supplements to the General Preliminaries in Section B should be recorded in the contract data

Should it be necessary to expand on any of the General Preliminaries clauses, the user should list the appropriate General Preliminary clause number and heading and insert the relevant provision under a suitable heading in bold as may be necessary

Definitions and interpretation (B1)

33 Clause 1.1 - Definitions

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

Item

34 Clause 1.2 - Interpretation

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

Item

Documents (B2)

35 Clause 2.1 - Checking of documents

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

Item

36 Clause 2.2 - Provisional **bills of quantities**

User note

37 Clause 2.3 - Availability of **construction information**

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

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38	Clause 2.4 - Ordering of materials and goods F:..... V:..... T:..... <u>Previous work and adjoining properties (B3)</u>	Item		
39	Clause 3.1 - Previous work - dimensional accuracy F:..... V:..... T:.....	Item		
40	Clause 3.2 - Previous work - defects F:..... V:..... T:.....	Item		
41	Clause 3.3 - Inspection of adjoining properties F:..... V:..... T:..... <u>The site (B4)</u>	Item		
42	Clause 4.1 - Handover of site in stages F:..... V:..... T:.....	Item		
43	Clause 4.2 - Enclosure of the works <u>User note</u> <i>Describe any specific hoarding requirements, other than already described in clause 4.2 or in the contract data</i> F:..... V:..... T:.....	Item		
44	Clause 4.3 - Geotechnical and other investigations F:..... V:..... T:.....	Item		
45	Clause 4.4 - Encroachments F:..... V:..... T:.....	Item		
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46	Clause 4.5 - Existing premises occupied F:..... V:..... T:.....	Item	
47	Clause 4.6 - Services - known F:..... V:..... T:..... <u>Management of contract (B5)</u>	Item	
48	Clause 5.1 - Management of the works F:..... V:..... T:.....	Item	
49	Clause 5.2 - Progress meetings F:..... V:..... T:.....	Item	
50	Clause 5.3 - Technical meetings F:..... V:..... T:..... <u>Samples, shop drawings and manufacturer's instructions (B6)</u>	Item	
51	Clause 6.1 - Samples of materials F:..... V:..... T:.....	Item	
52	Clause 6.2 - Workmanship samples F:..... V:..... T:.....	Item	
53	Clause 6.3 - Shop drawings F:..... V:..... T:.....	Item	
54	Clause 6.4 - Compliance with manufacturer's instructions F:..... V:..... T:.....	Item	
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<u>Deposits and fees (B7)</u>			
55	Clause 7.1 - Deposits and fees F:..... V:..... T:.....	Item	
<u>Temporary services (B8)</u>			
56	Clause 8.1 - Water F:..... V:..... T:.....	Item	
57	Clause 8.2 - Electricity F:..... V:..... T:.....	Item	
58	Clause 8.3 - Ablution and welfare facilities F:..... V:..... T:.....	Item	
59	Clause 8.4 - Communication facilities F:..... V:..... T:.....	Item	
<u>Prime cost amounts (B9)</u>			
60	Clause 9.1 - Responsibility for prime cost amounts <u>User note</u> <i>Where details of materials included in prime cost amounts <u>are not</u> readily available and it is therefore not possible for the contractor to price for waste, the relevant prime cost amount shall be inserted in the bills of quantities as a lump sum with the contractor being given the opportunity to separately price his overheads and profit and for taking delivery, etc as called for in this clause 9.1 of the preliminaries. In such case the fixing only or installation only of the relevant materials shall be provisionally measured for the contractor to price and shall be re-measured upon completion</i>		
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	<i>Where details of materials for which prime cost amounts are to be allowed are readily available, the quantity surveyor may elect to insert the relevant prime cost amounts in measured items, which measured items shall contain sufficient detail for the contractor to price for fixing and installation, waste, etc</i> F:..... V:..... T:.....	Item		
	<u>Attendance on subcontractors (B10)</u>			
61	Clause 10.1 - General attendance <u>User note</u> <i>General attendance is defined as being the duties of the contractor in terms of clause 12.2 of the JBCC n/s subcontract agreement</i> F:..... V:..... T:.....	Item		
62	Clause 10.2 - Special attendance <u>User note</u> <i>Insert details after the provisional sums (nominated or selected subcontract amounts) for any special attendance where specifically required for each n/s subcontractor separately</i> <i>It is important to note that general attendance only requires the contractor to "permit the subcontractor to use erected scaffolding, hoisting facilities, etc provided by the contractor, in common with others having the like right while it remains erected on the site" (refer to 12.2.13 of the JBCC n/s subcontract agreement). Many n/s subcontractors qualify their tenders to exclude scaffolding and/or hoisting facilities. Especially scaffolding could be an expensive item and it may be necessary in order to avoid claims to require the contractor to provide for the extended use of scaffolding for specific subcontracts within a description of "special attendance" in the applicable bill</i> F:..... V:..... T:.....	Item		
	Carried to Collection Section No. 1 Bill No. 1 Preliminary and General ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT		R	

	<u>General (B11)</u>			
63	Clause 11.1 - Protection of the works F:..... V:..... T:.....	Item		
64	Clause 11.2 - Protection/isolation of existing works and works occupied in sections F:..... V:..... T:.....	Item		
65	Clause 11.3 - Security of the works F:..... V:..... T:.....	Item		
66	Clause 11.4 - Notice before covering work F:..... V:..... T:.....	Item		
67	Clause 11.5 - Disturbance <u>User note</u> <i>The following clause may be used should "disturbance" [11.5] need to be extended</i> Disturbance All work is to be carried out in such a manner as to cause no unacceptable or unreasonable dust, noise, vibrations, nuisance, inconvenience, annoyance and the like to the public, others, other properties and traffic in so far as they exceed the permissible limitations set by government legislation or by the local authority. Any delays, stoppages and the like arising from or in order to comply with the above will not constitute grounds for an adjustment to the construction period or contract value whatsoever F:..... V:..... T:.....	Item		
68	Clause 11.6 - Environmental disturbance			
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Controlling all forms of pollution

The **contractor** shall be responsible for and take all precautions in controlling by whatever means necessary all forms of pollution emanating from the **site** during the **construction period** due inter alia to noise, artificial light, wind-blown sand, dust, deposits of mud, etc

The **contractor** is to ensure that all roads which border the **site** and are used by the **contractor** during the execution of the **works** are kept clean and free of any dirt or debris caused by the execution of the **works** ?

User note

Insert the following clause if an environmental management plan (EMP) is available and insert the EMP in an annexure

Environmental management plan

The **employer** has prepared an environmental management plan (EMP) (refer to Annexure ? for a copy of the relevant plan). The **contractor** shall price opposite this item for compliance with all the requirements of such EMP

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

Item

69 Clause 11.7 - **Works** cleaning and clearing

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

Item

70 Clause 11.8 - Vermin

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

Item

71 Clause 11.9 - Overhand work

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

Item

72 Clause 11.10 - Tenant installations

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

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73	Clause 11.11 - Advertising F:..... V:..... T:..... <u>SECTION C: SPECIFIC PRELIMINARIES</u> <u>User note</u> <i>Users shall avoid inserting in Section C items which may be construed as amending, modifying, correcting or supplementing the provisions of the JBCC Principal Building Agreement. Such amendments, modifications, corrections or supplements should be kept to the absolute minimum and should be inserted in Section A under the recited clause headings of the JBCC Principal Building Agreement in this Bill No. 1</i> <i>Selected examples of typical clauses are provided to indicate ways of describing such clauses. Users must delete, adapt or add to these examples to suit their particular circumstances</i>	Item		
74	Warranties for materials and workmanship Where warranties for materials and/or workmanship are called for, the contractor shall obtain a written warranty, addressed to the employer, from the entity supplying the materials and/or executing the work and shall deliver same to the principal agent on final completion of the contract The warranty shall state that workmanship, materials and installation are warranted for a specific period from the date of practical completion and that any defects that may arise during the specified period shall be made good at the expense of the entity supplying the materials and/or doing the work, upon written notice to do so The warranty will not be enforced if the work is damaged by defects in the execution of the works, in which case the responsibility for replacement shall rest entirely with the contractor F:..... V:..... T:.....	Item		
	Carried to Collection Section No. 1 Bill No. 1 Preliminary and General ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT		R	

75	Overtime Should overtime be required to be worked for any reason whatsoever, the cost of such overtime is to be borne by the contractor unless the principal agent has specifically authorised, prior to execution thereof, that costs for such overtime are to be borne by the employer F:..... V:.....T:.....	Item	
76	Cooperation of the contractor for cost management It is specifically agreed that the contractor accepts the obligation of assisting the principal agent in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the contract value does not exceed the budget F:..... V:.....T:.....	Item	
77	Overloading The contractor shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the works or temporary works eg scaffolding, etc. The contractor shall submit details of his proposed loading, storage, plant erection, etc to the principal agent for approval prior to proceeding with such loading, storing or erecting and shall comply with and pay for the principal agent's requirements in connection with the provision of temporary support work, etc. Any damage caused to the works by overloading shall be made good by the contractor at his sole expense F:..... V:.....T:.....	Item	
78	Propping of floors below The contractor is advised that propping of floors below may be required if he wishes to use any areas of completed suspended reinforced concrete slabs for vehicle access, storage of materials and goods and location of plant, scaffolding, etc. The location of these areas and any necessary propping shall be approved by the principal agent and the cost thereof shall be borne by the contractor F:..... V:.....T:.....	Item	
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79 Testing of flat roof waterproofing for watertightness

Flat roof waterproof areas shall be flooded and kept "ponded" for at least forty eight (48) hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing

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

User note

Insert the following where a health and safety specification is not yet available. Note that there is an obligation on the employer to ensure that the contractor has priced opposite this item for the compliance with the act and the regulations and the reasonable provisions of the health and safety specification

80 Health and safety

Without limiting the generality of the provisions of clause 2.0, the **contractor's** attention is drawn to the provisions of the Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993 as amended. It is specifically stated that the **employer** shall prepare a documented health and safety specification for the **works** and that the **employer** shall ensure that the **contractor** has made provision for the cost of health and safety measures during the execution of the **works**. The **contractor** shall price opposite this item for compliance with the act and the regulations and the reasonable provisions of the aforementioned health and safety specification [2.1]

User note

Insert the following where a health and safety specification is available. Note that there is an obligation on the employer to ensure that the contractor has priced opposite this item for the compliance with the act and the regulations and the reasonable provisions of the health and safety specification

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Health and safety

Without limiting the generality of the provisions of clause 2.0, the **contractor's** attention is drawn to the provisions of the Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993 as amended. It is specifically stated that the **employer** shall prepare a documented health and safety specification for the **works** (refer to Annexure ? for a copy of the relevant specification) and that the **employer** shall ensure that the **contractor** has made provision for the cost of health and safety measures during the execution of the **works**. The **contractor** shall price opposite this item for compliance with the act and the regulations and the provisions of the aforementioned health and safety specification [2.1]

The **contractor** shall:

1. Comply with the health and safety specification for the **works**
2. Prepare and agree with the health and safety consultant the health and safety plan for the **works**
3. Cooperate with the health and safety consultant in all respects
4. Manage the compliance of all subcontractors with the regulations and with the health and safety plan and specification
5. Conform to the conditions contained in the **employer's** health and safety specification

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

Item

81 Green star building certification

User note

Insert the provisions called for by the relevant green star consultant should it be a requirement that the project be submitted for green star certification

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

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82	Broad based black economic empowerment (BBBEE) Tenders submitted will be evaluated taking into account their empowerment rating The employer will be monitoring the broad based black economic empowerment (BBBEE) status of the contractor throughout the execution of the works The contractor is to submit to the principal agent on an annual basis a schedule of spend, split into vendors engaged as subcontractors and suppliers indicating their BBBEE rating including proof of the said rating F:..... V:.....T:.....			
83	Advertising rights The employer may elect to contract with advertising agencies for the erection of advertising hoardings, banners, wraps or the like for the duration of the contract. The contractor shall not prevent such an arrangement and will assist in the facilitation of same. The position and type of advertising structure to be agreed with the principal agent so as not to hinder the contractor in meeting his obligations under this agreement F:..... V:.....T:.....	Item		
84	Confidentiality The contractor undertakes to maintain in confidence any and all information regarding this project and shall obtain appropriate similar undertakings from all subcontractors and suppliers. Such information shall not be used in any way except in connection with the execution of the works No information regarding this project shall be published or disclosed without the prior written consent of the employer F:..... V:.....T:.....	Item		
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85 Media releases

All rights of publication of articles in the media, together with any advertising relating thereto or in any way connected with this project, shall vest with the **employer**

The **contractor** together with his **subcontractors** shall not, without the prior written consent of the **employer**, cause any statement or advertisement connected with this project to be printed, screened or aired by the media

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

SUMMARY OF CATEGORIES

Category : Fixed R.....

Category : Value R.....

Category : Time R.....

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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>BILL NO. 1</u>				
<u>EARTHWORKS (PROVISIONAL)</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.104 for Haylett formula purposes				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Nature of the ground</u>				
The Tenderer shall acquaint himself by personal examination of the nature of the ground. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" and where conditions of a more difficult character are indicated these are separately measured				
<u>Excavation for working space in rock</u>				
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				
<u>Bulking</u>				
No allowance is made in the measurements below for bulking				
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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 necessary multiple handling of material

Testing

Prices for filling are to include for all necessary density tests in accordance with SANS 1200

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Bill No. 1

Earthworks (Provisional)

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

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DEMOLITIONS ETC

Demolishing and removing building with roof, comprising concrete footings, surface beds, external brick/block walls, roof coverings, sanitary fittings, etc. complete including breaking up reinforced concrete pit cover slab, filling up with granular material, sealing off and carting away debris

- | | |
|---|---|
| 1 | Single storey building approximately 6 500 x 3 800mm wide, complete |
|---|---|

The following in existing septic tank, pit latrines, etc:

- | | |
|---|---|
| 2 | Remove sludge, dispose to a dumping area to be located by the specialist Contractor for the Truck capacity of 3000 - 7000 Litre |
|---|---|

TEMPORARY BARRIERS, SCREENS, ETC

Temporary barriers, screens, etc including removal

- | | |
|---|--|
| 3 | Hoarding 2100mm high formed of suitable timber framing with 0,58mm corrugated iron sheet nailed on |
|---|--|

SITE CLEARANCE ETC

Site clearance

- | | |
|---|--|
| 4 | Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth |
|---|--|

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Earthworks (Provisional)

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

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BULK EXCAVATION, FILLING, ETC

EXCAVATIONS ETC

Open face excavation in earth over sloping site

5	Open face excavation	m3	20
---	----------------------	----	----

Extra over bulk excavations in earth for excavation in

6	Soft rock	m3	2
---	-----------	----	---

7	Hard rock	m3	1
---	-----------	----	---

Keeping excavations free of water

8	Keeping excavations free of water (other than subterranean water)		Item
---	---	--	------

FILLING ETC

Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 90% Mod AASHTO density

9	Over site to form platforms	m3	20
---	-----------------------------	----	----

G7 Earth filling supplied by the contractor, compacted to 93% Mod AASHTO density

10	Over site to form platforms	m3	115
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Prescribed density tests on filling

11	"Modified AASHTO Density" test		Item
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<u>EXCAVATION, FILLING, ETC</u>			
<u>EXCAVATIONS ETC</u>			
<u>Excavation in earth not exceeding 2m deep</u>			
12	Trenches	m3	85
13	Holes	m3	37
<u>Excavation in earth exceeding 2m and not exceeding 4m deep</u>			
14	Latrine pit	m3	369
<u>Extra over trench and hole excavations in earth for excavation in</u>			
15	Soft rock	m3	46
16	Hard rock	m3	23
<u>Back excavation of vertical sides of excavation in earth for working space including backfilling compacted to 98% Mod. AASHTO density</u>			
17	Exceeding 0.50m and not exceeding 1.50m deep for placing and removing formwork to walls, etc., 200mm away from excavated face	m2	225
18	Exceeding 1.50m and not exceeding 3.00m deep for placing and removing formwork to walls, etc., 200mm away from excavated face	m2	314
<u>Extra over back excavation in earth for working space for excavation in soft rock material</u>			
19	Exceeding 0.50m and not exceeding 1.50m deep for placing and removing formwork to walls, strip footing, etc., 200mm away from excavated face	m2	24
20	Exceeding 1.50m and not exceeding 3.00m deep for placing and removing formwork to walls, strip footing, etc., 200mm away from excavated face	m2	34
<u>Extra over back excavation in earth for working space for excavation in hard rock material</u>			
21	Exceeding 0.50m and not exceeding 1.50m deep for placing and removing formwork to walls, strip footing, etc., 200mm away from excavated face	m2	13
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22	Exceeding 1.50m and not exceeding 3.00m deep for placing and removing formwork to walls, strip footing, etc., 200mm away from excavated face	m2	18	
	<u>Risk of collapse of excavations</u>			
23	Sides of trench and hole excavations not exceeding 1,5m deep	m2	280	
24	Sides of trench and hole excavations exceeding 1,5m deep	m2	321	
	<u>Extra over all excavations for carting away</u>			
25	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor	m3	472	
	<u>Keeping excavations free of water</u>			
26	Keep excavations free of water (other than subterranean water)		Item	
	<u>De-watering of seepage water and water from other sub-soil sources</u>			
27	Dewatering system for removal of seepage water and water from other subterranean sources in the excavations designed and executed by the contractor including all temporary pipes, drainage sumps, silt trap, connections, well points, etc		Item	
	<u>FILLING ETC</u>			
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site stabilised with 8% cement per volume, compacted to 98% Mod AASHTO density</u>			
28	Backfilling to trenches, etc	m3	45	
	<u>G6 Earth filling supplied by the Contractor and brought to site and compacted to 98% Mod AASHTO density</u>			
29	Under floors, steps, pavings, etc	m3	60	
	<u>Soil supplied by the contractor stabilised with 5% cement per volume, compacted to 100% Mod AASHTO density</u>			
30	Backfilling behind pit walls, etc	m3	145	
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Earthworks (Provisional)

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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>BILL NO. 2</u>				
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Concrete</u>				
All concrete work shall be done in accordance with the latest edition of SABS 1200G, excluding clause 8				
<u>Formwork</u>				
Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use Formwork to soffits of solid slabs, etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described Formwork has been measured to the sides of all reinforced concrete in foundations and will be remeasured according to actual usage. However, 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"				
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Section No. 2 Bill No. 2 Concrete, Formwork and Reinforcement ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

Cost of tests

All concrete is to be tested in accordance with SANS 2001-CC1 and shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the principal agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the principal agent

CONCRETE

NOTE: Unless otherwise stated herein, all items in this section shall be deemed to fall into Work Group No.110 for Haylett formula purposes

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Concrete, Formwork and Reinforcement

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

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**UNREINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

15MPa/19mm concrete

1	Surface blinding under footings and bases	m3	15
2	Filling in cavity walls	m3	31

**REINFORCED CONCRETE CAST AGAINST
FORMWORK**

30MPa/19mm concrete

3	Strip footings	m3	25
4	Foundation beams	m3	13
5	Bases	m3	75
6	Ramps	m3	3
7	Sloping apron including forming falls	m3	15
8	Surface beds cast in panels on waterproofing	m3	22
9	Slabs including beams and inverted beams	m3	26

TEST BLOCKS

Test blocks

10	Allow for all necessary concrete test cubes size 150 x 150 x 150mm cast from batches of concrete set of three, made, stored, cured and tested in accordance with SANS 2001-CC1, including use of approved cube moulds, transporting to an approved testing laboratory for testing, paying all charges and submitting reports to the Structural Engineer. (Provisional)	Sets	55
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CONCRETE SUNDRIES

Finishing top surfaces of concrete smooth with a wood float

11	Surface beds, slabs, bases, etc	m2	460
12	Surface beds, slabs, apron, etc to falls	m2	114

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Bill No. 2

Concrete, Formwork and Reinforcement

**ERADICATION OF PIT LATRINES PROGRAMME FOR
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<u>SLEEVES</u>				
<u>Plastic sleeves for pipes cast in concrete slabs not exceeding 300mm long</u>				
13	110mm Sleeve	No	33	
14	250mm Sleeve	No	33	
<u>Core drilling of holes for pipes exceeding 200mm and not exceeding 250mm diameter</u>				
15	255mm Thick reinforced concrete slab, beam, wall, etc	No	5	
<u>FORMWORK</u>				
NOTE: Unless otherwise stated herein, all items in this section shall be deemed to fall into Work Group No. 111 for Haylett formula purposes				
<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u>				
<u>Rough formwork to sides</u>				
16	Bases	m2	29	
17	Strip foundations	m2	65	
18	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	127	
19	Edges of surface bed panels, ramps, etc not exceeding 300mm high or wide	m	636	
<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u>				
<u>Rough formwork to soffits</u>				
20	Soffit of slab not exceeding 250mm thick propped up exceeding 1.5m and not exceeding 3.5m	m2	70	
21	Soffit of slab exceeding 250mm not exceeding 500mm thick propped up exceeding 1.5m and not exceeding 3.5m	m2	34	
<u>MOVEMENT JOINTS, ETC</u>				
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	<u>Expansion joints with 10mm Jointex between vertical concrete and brick surfaces</u>		
22	Not exceeding 300mm wide	m	198
	<u>Saw cut joints</u>		
23	3 x 40mm Saw cut joints in top of concrete	m	65
	<u>REINFORCEMENT (PROVISIONAL)</u>		
	NOTE: Unless otherwise stated herein, all items in this section shall be deemed to fall into Work Group No. 114 for Haylett formula purposes		
	<u>High tensile and mild steel reinforcement to structural concrete work</u>		
24	Various diameter reinforcing bars	t	13.704
	<u>High tensile steel dowel bars</u>		
25	16mm Diameter dowel bar 500mm long with one end embedded 250mm deep in side of concrete at expansion joint and other end greased and wrapped in polythene sheeting, including hole through formwork	No	71
	<u>Fabric reinforcement</u>		
26	Type 193 fabric reinforcement in surface beds, etc	m2	328
27	Type 395 fabric reinforcement in surface beds, etc	m2	230

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 2</u>			
	<u>BILL NO. 3</u>			
	<u>PRECAST CONCRETE</u>			
	NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation			
	NOTE: Unless otherwise stated herein, all items in this Bill shall be deemed to fall into Work Group No.112 for Haylett Formula purposes			
	NOTE: All precast/prestressed concrete shall be in accordance with SANS 2001-CC1			
	<u>PRECAST CONCRETE</u>			
	<u>Precast concrete slab for toilet pedestal</u>			
1	470 x 600 x 150mm Thick reinforced slab including 250mm diameter opening	No	35	
	<u>Prefabricated pre-stressed concrete ribs</u>			
2	990 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	12	
3	1 045 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	10	
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	Precast Concrete			
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4	1 265 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	29	
5	1 320 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	8	
6	1 820 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	5	
7	2 240 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	5	
8	220 x 100mm Pre-stressed concrete rib in lengths not exceeding 5m	m	34	
9	220 x 100mm Pre-stressed concrete rib in lengths exceeding 5m and not exceeding 7,5m	m	79	
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Section No. 2 Bill No. 3 Precast Concrete ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

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Precast Concrete

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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>BILL NO. 4</u>				
<u>MASONRY</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.116 for Haylett Formula purposes				
NOTE: All masonry shall be in accordance with SANS 2001-CM1				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Sizes in descriptions</u>				
Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick				
<u>Hollow walls</u>				
Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole				
<u>Bagged and sealed walls</u>				
Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats bitumen emulsion waterproofing coating				
<u>Face bricks</u>				
Bricks shall be ordered timeously to obtain uniformity in size and colour				
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Section No. 2 Bill No. 4 Masonry ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				R

<u>Pointing</u>				
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc				
<u>BRICKWORK</u>				
<u>FOUNDATIONS (PROVISIONAL)</u>				
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar</u>				
1	Piers	m3	3	
2	One brick walls	m2	163	
3	330mm Hollow walls of two half brick skins including wire ties	m2	269	
<u>SUPERSTRUCTURE</u>				
<u>Brickwork of NFP bricks in class II mortar</u>				
4	Piers	m3	5	
5	Half brick walls	m2	129	
6	Half brick walls in beamfilling	m2	21	
7	One brick walls	m2	508	
<u>BRICKWORK SUNDRIES</u>				
<u>Bagging of 1:3 cement and sand mixture</u>				
8	On brick walls, piers, etc	m2	633	
<u>Movement joints with "Jointex" between horizontal concrete and brick surfaces</u>				
9	10mm Joints not exceeding 300mm wide	m	288	
<u>Brickwork reinforcement</u>				
10	75mm Wide reinforcement built in horizontally	m	959	
11	150mm Wide reinforcement built in horizontally	m	3 823	
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FACE BRICKWORK

Face brickwork to be "Corobrik®" Firelight Satin FBX of 20-30MPa nominal compressive strength in Class II mortar with recessed horizontal and recessed vertical joints

16	Extra over NFX brickwork for face brickwork in foundations (Provisional)	m2	112
17	Extra over NFP brickwork for face brickwork	m2	496
18	Extra over NFP brickwork for brick-on-edge header course lintels 1 course high, pointed on face and 115mm soffit	m	80
	<u>Brick-on-edge header course copings, sills, etc of "Corobrik® Firelight Satin FBX" face bricks, pointed with recessed joints on all exposed faces</u>		
19	170mm Wide sills set level and slightly projecting	m	37

FIBRE CEMENT WINDOW CILLS

Natural grey sills in single lengths bedded in class II mortar including metal fixing lugs etc

20	12 x 150mm Wide sills set flat and slightly projecting	m	37
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Bill No. 4

Masonry

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Masonry

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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>BILL NO.5</u>				
<u>WATERPROOFING</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 120 for Haylett formula purposes				
<u>DAMP PROOFING OF WALLS AND FLOORS</u>				
<u>One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B)</u>				
1	In walls	m2	56	
2	Under slabs on brickwork	m	172	
<u>Two coats of "Brixéal" or other approved bitumen waterproofing coating</u>				
3	On bagged brick walls	m2	265	
<u>One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape</u>				
4	Under surface beds	m2	110	
<u>JOINT SEALANTS</u>				
<u>Pre-compressed bitumen impregnated foam plastic joint sealing strips</u>				
5	10 x 10mm In joints between frames and walls	m	547	
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Waterproofing

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Waterproofing

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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>BILL NO. 6</u>				
<u>ROOF COVERINGS</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.124 for Haylett Formula purposes				
NOTE: All roof covering to be installed to manufacturers detail and applicable SANS codes. All roof sheeting shall be laid under a 5 year written guarantee for site workmanship and watertightness				
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Section No. 2 Bill No. 6 Roof Coverings ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

PROFILED METAL SHEETING AND ACCESSORIES

0,53mm "Chromadek" or other approved, Colomate finish galvanised metal IBR profile roof sheeting at 17.5 degrees fixed to intermediate timber purlins at 1 250mm centres and to ridge and eaves with minimum 50mm sheeting end overlaps, all in accordance with architects drawings and manufacturer's specifications

1	Roof covering with pitch not exceeding 25 degrees fixed to timber purlins at maximum 1200mm centres with a minimum of 50mm sheeting projection beyond purlins at eaves.	m2	294
2	Extra over IBR metal roof covering for OPAL Glass fibre reinforced polyster (weight 2,4kg/m ²) roof sheeting fixed with 65 mm galvanised Tek screws and newway seals in alternate sheets between galvanised metal sheet.	m2	118
	<u>0,53mm "Chromadek" or other approved, Colomate finish galvanised metal ridge cap with and including ridge closer, all in accordance with architects drawings and manufacturer's specifications</u>		
3	Ridge capping	m	52
4	Counter flashing 70mm girth	m	107
	<u>"Sondor" or other approved corrugated polycloser</u>		
5	Under ridge capping	m	54
6	On beamfilling	m	158

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Roof Coverings

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ROOF AND WALL INSULATION

Sisalation® 420 Heavy industrial grade reinforced aluminium foil insulation double sided, heavy grammage reflective foil laminate incorporating eight layers of aluminium foil, reinforcing scrim, Kraft paper and polyethylene, tested for conformance with SANS 1381-4:2009, with a Class 1 fire rating in accordance with SANS 10177 - 3:2005 and BS 476 part 5, 6 and 7, drawn tautly across rafters and secured to each rafter with 38mm x 3,2mm x 1100mm hardboard counter batten strips positioned flush with the bottom edge of the material thus leaving 150mm overlap exposed at the top for the next layer and 150mm overlap thereafter on each 1 250mm width roll

- 7 Insulation laid taut over rafters and under purlins (at approximately 1 250mm centres) including galvanised steel straining wires

m2

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Roof Coverings

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Roof Coverings

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Roof Coverings

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<u>BILL NO. 7</u>				
<u>CARPENTRY AND JOINERY</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 126 for Haylett Formula purposes				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Roof Trusses:</u>				
The following is applicable in respect of plate nailed roof trusses:				
Trusses are at maximum 1000mm centres. Roof covering is 0,50mm colomate galvanised metal IBR on timber purlins				
The dimensions in the descriptions of the trusses are nominal and actual measurements are to be obtained from the Architect and/or on site before design or fabrication commences				
<u>Joinery:</u>				
Descriptions for the following joinery fittings, etc., shall be deemed to include all ironmongery, metalwork, paint finishes, laminated finishes, etc., and for assembling and installing complete				
<u>TIMBER ROOF CONSTRUCTION</u>				
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Section No. 2 Bill No. 7 Carpentry and Joinery ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

<u>Design Responsibility</u>				
The contractor shall be responsible for the design of the timber roof construction. The contractor will submit shop drawings for approval by the principal agent within two weeks after the date of tender closing. Appointment of the successful tenderer will be subject to approval of the timber roof construction. The contractor shall commence manufacturing only after written approval of shop drawings from the principal agent				
<u>Plate nailed timber roof construction grade V4 minimum</u>				
1	Design, supply and erect the complete double pitch roof structure to new building (approx. 41m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (2M3F1D)	No	1	
2	Design, supply and erect the complete double pitch roof structure to new building (approx. 30m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (4GR1T)	No	1	
3	Design, supply and erect the complete double pitch roof structure to new building (approx. 31m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (6B)	No	2	
4	Design, supply and erect the complete double pitch roof structure to new building (approx. 36m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (8G)	No	1	
5	Design, supply and erect the complete double pitch roof structure to new building (approx. 28 m2 on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (4G)	No	1	
<u>EAVES, VERGES, ETC</u>				
<u>"Everite Nutec" medium density plain fibre cement boards</u>				
6	225 x 12mm Thick fascia (code: 041-202) with aluminium H-profile fascia joiners (code: 685-195) including drilling for and fixing with hot dip galvanised drive screws and washers	m	158	
7	200 x 80mm Moulded socketless barge board (code: 721-731) with uPVC H-profile barge joiners	m	133	
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DOORS, ETC.

Wrought Hardwood Doors

8	44mm Door 813 x 1900mm high (D1)	No	22	
	<u>"TDM" or similar approved "Saligna BB" doors hung to steel frames (elsewhere measured)</u>			
9	44mm Framed, ledged and braced batten door size 813 x 2040mm high of SA Pine sub-frame with double top and bottom rails, 20 x 150mm middle ledge, 20 x 225mm bottom ledge and 20 x 110mm braces, filled in with tongued and grooved boarding in V-joint rail (D2)	No	7	
10	Ditto, 44mm Framed, ledged and braced batten door size 997 x 2040mm high of SA Pine sub-frame with double top and bottom rails, 20 x 150mm middle ledge, 20 x 225mm bottom ledge and 20 x 110mm braces, filled in with tongued and grooved boarding in V-joint rail (D3)	No	2	

FRAMED, FRAMES, ETC

Wrought softwood

11	60 x 50mm Rebated and angle rounded frame bolted to wall with heads of bolts sunk and pelleted	m	176	
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Bill No. 7

Carpentry and Joinery

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Carpentry and Joinery

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Carpentry and Joinery

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<u>SECTION NO. 2</u> <u>BILL NO.8</u> <u>IRONMONGERY</u> NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 132 for Haylett Formula purposes				
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Section No. 2 Bill No. 8 Ironmongery ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

SUPPLEMENTARY PREAMBLES

Proprietary items

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

Prices are to be based on the specific products/articles specified. If tenderers wish to offer alternative products/articles for certain items, these items are to be clearly marked and the alternative specification given with supporting brochures etc clarifying the features of the products/articles offered

On request returnable samples are to be provided to the principal agent for consideration

Finishes to ironmongery

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

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

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Section No. 2

Bill No. 8

Ironmongery

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

HINGES, BOLTS, ETC

Manufactured by "Union" or similar approved

1	100 x 75mm Medium duty brass butt hinge	No	116
2	100 x 75mm Two ball bearing butt hinge (Code 8352-100 SB)	No	66
3	50 x 25mm LD polished barrel bolt	No	40

CATCHES, CABIN HOOKS, ETC.

Manufactured by "Dorma" or similar approved

4	"DHC-SS-030-A" stainless steel hat and coat hook without rubber buffer	No	40
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Manufactured by "Miles Nelson" or similar approved:

5	150mm "276SC10150BP" cabin hook solid chrome	No	14
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LOCKS

Manufactured by "Dorma" or similar approved

6	"D036S Europrofile" single cylinder sash lock	No	18
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Manufactured by "Union" or similar approved

7	47mm "MG47" Padlock	No	11
8	"CZ80941CH" WC indicator bolt	No	28

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Ironmongery

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

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HANDLES

Manufactured by "Dorma" or similar approved

- | | | | |
|---|---|----|----|
| 9 | "CB30" Lever handle on rectangular Euro cylinder back plate 61cm centres. | No | 36 |
|---|---|----|----|

PHOTOLUMINESCENT SIGNS

SUPPLEMENTARY PREAMBLES

Signs are to comply with SANS 1186-1 to 5 and to be to the approval of the local authority. Signs are to have anodised aluminium frames

Prices are to include for fixing by approved methods. The use of double sided tape will not be permitted. Surface mounted signs are to be concealed fixed

Samples, specifications, literature, etc of materials and fabricated articles the tenderer proposes to use shall be submitted with the tender

A ten year guarantee on materials and workmanship shall be submitted by the successful tenderer

Wall mounted photoluminescent statutory signs

- | | | | |
|----|---------------------------|----|---|
| 10 | 180 x 180mm Female Sign | No | 4 |
| 11 | 180 x 180mm Disabled Sign | No | 2 |
| 12 | 180 x 180mm Male Sign | No | 4 |

BATHROOM ACCESSORIES

Manufactured by "Franke" or similar approved

- | | | | |
|----|---|----|----|
| 13 | "BS677" Stainless steel toilet roll holder, plugged and screwed to wall with stainless steel screws | No | 3 |
| 14 | "Halcast No. 366" Chromium plated toilet roll holder, plugged and screwed to wall with stainless steel screws | No | 32 |

Manufactured by "She Bin" or similar approved

- | | | | |
|----|-----------------------------|----|----|
| 15 | Feminine hygiene pedal bins | No | 16 |
|----|-----------------------------|----|----|

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Bill No. 8

Ironmongery

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

Section No. 2

Bill No. 8

Ironmongery

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Bill No. 8

Ironmongery

**ERADICATION OF PIT LATRINES PROGRAMME FOR
SCHOOLS**

60491906 - PRINCIPAL BUILDING AGREEMENT

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<u>SECTION NO. 2</u>				
<u>BILL NO. 9</u>				
<u>METALWORK</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.136 for Haylett formula purposes				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions</u>				
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				
Galvanising must comply to: SANS 121-ISO 1461 & SANS 32-EN 10240 and SANS 14713-ISO 14713 for Hot Dip galvanising on iron and steel articles				
<u>Door frames</u>				
Pressed steel door frames shall be supplied with one pair of 100mm galvanised steel loose pin hinges				
<u>Galvanised steel windows</u>				
Windows shall be provided with polished brass fittings				
Only window openings shall be fitted with horizontal 8mm square burglar bars at maximum 150mm centres				
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Section No. 2 Bill No. 9 Metalwork ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

Courses adjacent to window jambs are to have cores filled allowing fixing lugs to be built-in

GALVANISED MILD STEEL GATES, SCREENS, ETC.

Welded gate and frame

- | | |
|---|---|
| 1 | Single gate 900 x 2100mm high of 25mm steel tubing and fitted with a pair of suitable hinges welded to post and with ears for padlock (G1) |
| 2 | Double gate 1800 x 2100mm high of 25mm steel tubing and fitted with a pair of suitable hinges welded to post and with ears for padlock (G2) |

No 7

No 1

GALVANISED PRESSED STEEL DOOR FRAMES

1,2mm Rebated frames suitable for one brick walls

- | | |
|---|----------------------------------|
| 3 | Frame for door 813 x 2032mm high |
|---|----------------------------------|

No 31

GALVANISED STEEL WINDOWS, DOORS, ETC

Purpose made steel windows with 8mm burglar bars to opening sashes

- | | |
|---|--|
| 4 | Window (W01) overall size 889 x 457mm high |
|---|--|

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Metalwork

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

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Metalwork

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Bill No. 9

Metalwork

**ERADICATION OF PIT LATRINES PROGRAMME FOR
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60491906 - PRINCIPAL BUILDING AGREEMENT**

Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BILL NO. 10</u> <u>PLASTERING</u> NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 142 for Haylett formula purposes <u>SUPPLEMENTARY PREAMBLES</u> <u>Testing of sand/cement screeds:</u> Testing to be done by an accredited independent testing specialist, or by the provision of independently certified test data to demonstrate compliance with the Specification as set out below Testing to include both light tap and heavy weight impact using a 4kg mass in compliance with the BRE screed tester requirements Maximum indentation not to exceed 3mm Alternative substrate testing methods may be put forward for consideration and acceptance by the Principal Agent All test results to be provided in Microsoft Excel format with unique numbers and the positions of tests referenced and indicated on a floor plan (floor plan to be provided by Principal Agent.) In all instances of results failing to comply as determined by the Principal Agent, additional tests to prove final compliance will be for the account of the contractor <u>EPOXY FLOOR COATINGS</u>				
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Section No. 2 Bill No. 10 Plastering ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

	<u>2 Part "Sikafloor 161" epoxy primer with "Sikafloor 264" seal coat (colour: Grey) as per manufacturer's specifications</u>		
1	On screeded floors	m2	212
2	Skirtings 60mm high	m	195
	<u>SCREEDS</u>		
	<u>Screeds on concrete</u>		
3	30mm Thick on narrow widths	m2	3
4	30mm Thick on floors and landings	m2	216
	<u>INTERNAL PLASTER</u>		
	<u>Cement plaster on brickwork</u>		
5	On walls	m2	774
6	On narrow widths	m2	57
	<u>SPECIALISED PLASTER TYPE WALL COATINGS</u>		
	<u>15mm Thick impermeable plaster mixed with silicite sealing agent applied in strict accordance with manufacturer's specifications, on brickwork</u>		
7	On walls	m2	629

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Bill No. 10
Plastering
**ERADICATION OF PIT LATRINES PROGRAMME FOR
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Plastering

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Plastering

**ERADICATION OF PIT LATRINES PROGRAMME FOR
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Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO. 2</u>				
	<u>BILL NO. 11</u>				
	<u>TILING</u>				
	NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
	NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 144 for Haylett formula purposes				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>Fixing</u>				
	Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding				
	Tiling described as "fixed with adhesive on power floated concrete" shall be deemed to include for approved tiling key-coat				
	Ceramic, porcelain, marble and granite tiles are to be fixed and grouted with suitable adhesives and grouts from the "Tal Professional" ("Ceresit Tylon"?) range of products as recommended by the manufacturer of the tiles				
	<u>WALL TILING</u>				
	<u>200 x 200 x 5mm White glazed ceramic tiles fixed with an approved adhesive to plaster (plaster elsewhere)</u>				
1	On walls in isolated panels, splashbacks, etc	m2	23		
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	Tiling				
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<u>BILL NO. 12</u>				
<u>PLUMBING AND DRAINAGE</u>				
<u>(PROVISIONAL)</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.148 for Haylett formula purposes				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Wire gratings</u>				
Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings				
<u>Stormwater channels</u>				
Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc, and disposal of surplus material on site				
<u>Septic tanks</u>				
Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site				
<u>Sealing of edges</u>				
Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone				
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Plumbing and Drainage (Provisional)				
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uPVC pipes and fittings

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

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

uPVC pressure pipes and fittings

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

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

Copper pipes

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

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

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing" and only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained

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Fixing of pipes

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

Paper wrapping to pipes

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

Disinfection of water pipework

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

Laying, backfilling, bedding, etc of pipes

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

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

SANS 1200L : Medium-pressure pipelines

SANS 1200LD : Sewers

SANS 1200LE : Stormwater drainage

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

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

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

General

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 93% Mod AASHTO density and disposal of surplus material on site

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

Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured)

As-built drawings

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

RAINWATER GOODS

uPVC gutters and rainwater pipes

1	110mm Half-round roof gutters	m	140
2	Extra over gutter for stopped end	No	38
3	Extra over gutter for outlet for 110mm pipe	No	26
4	75mm Diameter rainwater pipes	m	76
5	Extra over rainwater pipe for bend	No	34
6	Extra over rainwater pipe for shoe	No	20
7	Extra over rainwater pipe for swan-neck	No	20

SANITARY FITTINGS

"Atlas Plastics" or similar approved

8	"Bowl" urinal (code: 507AP) fixed to wall with and including matching brackets complete	No	8
9	"Christy" wash hand basin with splashback (code: 383AP) polyethylene wash hand basin size 570 X 395mm (colour: granite) fixed to wall with and including cast iron brackets	No	22
10	"VIP 200" low level floor mounted WC pedestal (code: 222AP) complete with flap and incorporated seat	No	30

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WASTE UNIONS ETC

"Atlas Plastics" or similar approved

11	Waterless urinal fitting and waste (code: 496AP)	No	8
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"Cobra Watertech" or similar approved

12	32mm Basin waste union (code: 303) including plug and chain	No	24
----	---	----	----

TRAPS, ETC.

"Marley" or similar approved

13	50mm PVC trap (code: ETPA10)	No	22
----	------------------------------	----	----

TAPS, VALVES, ETC

"Cobra Watertech" or similar approved

14	15mm 111-15 Pillar taps fitted with restriction washer, one tap hole stopper	No	22
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15	15mm 111-041 Medical elbow action pillar tap with flanged backnut fitted with restriction washer and one tap hole stopper	No	3
----	---	----	---

16	15mm 1003/125 Brass fullway wheelhead gate valve	No	22
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"Plumpride" or similar approved

17	15mm Plastic bib tap	No	8
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VENT PIPES, ETC

"SWAN plastics" or similar approved black PVC UV stabilized vent pipes

18	110mm Vent pipe with and including holderbats screwed to walls	m	122
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Extra over black PVC UV stabilized vent pipe for fittings

19	110mm Sockets to be cut off and used to fix shade cloth over vent pipe (elsewhere measured).	No	34
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20	110mm PVC single socket cast into slab for 110mm vent pipe (elsewhere measured)	No	34
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21	110mm pipe x 130mm Long welded to socket to form hole through slab.	No	34	
22	55% Black shade cloth to top of vent pipe (elsewhere measured)	No	34	
	<u>Sundries</u>			
23	Provide all necessary apparatus, water, etc, for and test the whole of the Sanitary Plumbing to the satisfaction of the Architect and Local Authority and replace any defective work free of charge and leave perfect (PIT)	No	6	
	<u>SANITARY PLUMBING</u>			
	NOTE: Unless otherwise stated herein, all items in this section shall be deemed to fall into Work Group No. 146 for Haylett formula purposes			
	<u>Class 34 uPVC pipes</u>			
24	50mm Pipes	m	152	
25	110mm Pipes	m	10	
	<u>Class 34 uPVC pipes chased in walls, etc including supports</u>			
26	50mm Pipes	m	6	
27	110mm Pipes	m	5	
	<u>Extra over uPVC pipes for</u>			
28	50mm Access bend	No	43	
29	50mm Access junction	No	22	
30	50mm Bend	No	92	
31	50mm Junction	No	34	
32	110mm Bend	No	6	
33	110mm Junction	No	3	
34	110mm Access bend	No	3	
35	110mm Access junction	No	3	
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36	110mm Pan connector	No	3
37	110mm "GI Two-way" vent valve	No	3
<u>WATER SUPPLIES</u>			
<u>Class II copper pipes</u>			
38	15mm Pipes	m	41
39	22mm Pipes	m	96
<u>Class II copper pipes chased in walls</u>			
40	15mm Pipes	m	4
41	22mm Pipes	m	1
<u>Extra over class II copper pipes for solvent welded fittings</u>			
42	15mm fittings	No	95
43	22mm fittings	No	53
<u>TANKS, ETC</u>			
<u>"Jo-jo" or similar approved</u>			
44	5000 litre Low profile water tank with and including 4mm galvanised wire looped double to top of tank and anchored to top of slab with Y10 rod cast into slab at all four corners, including 15mm standard garden hose to isolate wire and prevent damage to tank or other approved holding down material secured around tank and to concrete pedestal	No	6
45	3mm Thick galvanised plate with and including 23mm hole to be bolted onto edge of concrete slab with 2 x 8mm raw bolts	No	6
46	20mm "Cobra" 541 tank locking tap fitted to a 22mm extension pipe with barrel nipple and galvanised socket	No	6
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	<u>SECTION NO. 2</u>				
	<u>BILL NO. 13</u>				
	<u>GLAZING</u>				
	NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
	NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.150 for Haylett formula purposes				
	<u>GLAZING TO STEEL WITH PUTTY</u>				
	<u>6.38mm Arctic Snow Laminated Safety Glass</u>				
1	Panes exceeding 0,1m ² and not exceeding 0,5m ²	m2	20		
	<u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u>				
	<u>6mm Silvered float glass copper backed mirror with polished edges, holed for and fixed with chromium plated dome capped screws with rubber buffers to plugs in brickwork or concrete</u>				
2	Mirror 300 x 600mm high with dome capped screws	No	22		
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	Glazing				
	ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS				
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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BILL NO. 14</u> <u>PAINTWORK</u> NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 152 for Haylett formula purposes <u>SUPPLEMENTARY PREAMBLES</u> <u>PREPARATORY WORK TO EXISTING WORK</u> <u>Previously painted plastered surfaces</u> Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth <u>PROPRIETY ITEMS OR MATERIALS</u> Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Head: Public Works <u>COLOURS</u> Unless otherwise described all paintwork shall be deemed to have a colour value in excess of 7 on the Munsell system in accordance with SANS 1091 <u>PAINTWORK ETC TO NEW WORK</u> <u>ON INTERNAL FLOATED PLASTER SURFACES</u>				
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Bill No. 14

Paintwork

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Bill No. 14

Paintwork

**ERADICATION OF PIT LATRINES PROGRAMME FOR
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60491906 - PRINCIPAL BUILDING AGREEMENT

Item No	Quantity	Rate	Amount
SECTION NO. 2			
BILL NO. 15			
EXTERNAL WORKS (PROVISIONAL)			
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.146 for Haylett formula purposes			
SUPPLEMENTARY PREAMBLES			
<u>Stormwater channels</u>			
Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 95% Mod AASHTO density and disposal of surplus material on site			
<u>Septic tanks</u>			
Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site			
<u>Soakaway</u>			
Descriptions of soakaway drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, approved geofabric filter blanket over stone, 300mm earthfilling over and disposal of surplus material on site			
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Section No. 2 Bill No. 15 External Work (Provisional) ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT			

<u>General</u>				
Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 93% Mod AASHTO density and disposal of surplus material on site				
<u>WALKWAYS</u>				
<u>The following in walkways:</u>				
<u>Excavation in earth not exceeding 2m deep</u>				
1	Reduced levels under floors	m3	49	
<u>Extra over channel excavations in earth for excavation in</u>				
2	Soft rock	m3	5	
3	Hard rock	m3	2	
<u>Risk of collapse of excavations</u>				
4	Sides of excavations not exceeding 1.5m deep	m2	54	
<u>Extra over all excavations for carting away</u>				
5	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor	m3	45	
<u>Keeping excavations free of water</u>				
6	Keep excavations free of water (other than subterranean water)			Item
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site stabilised with 8% cement per volume, compacted to 98% Mod AASHTO density</u>				
7	Backfilling to trenches, etc	m3	3	
<u>G7 Earth filling supplied by the contractor, compacted to 93% Mod AASHTO density</u>				
8	Under floors, steps, pavings, etc	m3	29	
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External Work (Provisional)				
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	<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 90% Mod AASHTO density	m2	194	
	<u>Weedkiller (active ingredients metalaclor 102.8 g/l, terbitilasien 248.6 g/l and atrasien 248.6 g/l) mixed in the proportion of 100 ml weedkiller to 100 l water and applied at a rate of 10 l/m²</u>			
10	Under paving etc	m2	194	
	<u>25MPa/19mm concrete</u>			
11	Pavings cast in panels	m3	26	
	<u>Test blocks</u>			
12	Allow for all necessary concrete test cubes size 150 x 150 x 150mm cast from batches of concrete set of three, made, stored, cured and tested in accordance with SANS 2001-CC1, including use of approved cube moulds, transporting to an approved testing laboratory for testing, paying all charges and submitting reports to the Structural Engineer. (Provisional)	Sets	5	
	<u>Finishing top surfaces of concrete smooth with a wood float</u>			
13	Surface beds, slabs, apron, etc to falls	m2	194	
	<u>Rough formwork to sides</u>			
14	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	216	
	<u>Expansion joints with 12mm softboard (bitumen impregnated softboard) between vertical concrete surfaces, including necessary formwork</u>			
15	Not exceeding 300mm high through slabs	m	126	
	<u>Saw cut joints</u>			
16	12 x 100mm Saw cut joints in top of concrete	m	126	
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External Work (Provisional)				
ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS				
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	<u>Fabric reinforcement</u>		
17	Type 193 fabric reinforcement in surface beds, etc	m2	162
	<u>"Thioflex" two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>		
18	12 x 10mm In saw cut joints in floors	m	126
	<u>EARTH DRAIN (WITH BERM)</u>		
19	Excavate not exceeding 1m deep for earth drain	m3	5
20	In landscape mounds, berms, etc	m3	5

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Section No. 2
Bill No. 15
External Work (Provisional)
**ERADICATION OF PIT LATRINES PROGRAMME FOR
SCHOOLS**
60491906 - PRINCIPAL BUILDING AGREEMENT

FENCING

Galvanised mild steel fence with bitumen-aluminium painted (two coats) steel pipe posts, stays, gates, etc including galvanised steel bolts, straining eye bolts, etc, site clearance and preparation of ground

21	Fencing 1 800mm high of 4 strands of galvanised twisted double strand 1.6mm straining wire tied to posts and eye bolts and covered with 50 x 50 x 2.5mm welded wire mesh tied at 150mm centres to each straining wire including 50mm diameter intermediate posts 1500mm long at not exceeding 3000mm centres	m	34
22	Continuous razor wire security roll to top of fence flat wrapped in 700mm diameter rings, tied together and to straining wire at 150mm centres	m	34
23	50mm Diameter inclined stay 1 800mm long, including caps, base plates, concrete base, etc	No	8
24	100mm Diameter straining or corner post 1800mm long, including caps, base plates, concrete base, etc	No	4
25	Gate 1 350mm x 1 800mm high of 50mm diameter framing covered with 50 x 50 x 2.5mm welded wire mesh tied at 150mm centres and steel security spikes screwed to top of gate, including hinges, heavy duty lockable barrel bolt and 63mm brass five-pin tumbler padlock	No	1

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Bill No. 15

External Work (Provisional)

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

Section No. 2

Bill No. 15

External Work (Provisional)

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Section No. 2

Bill No. 15

External Work (Provisional)

**ERADICATION OF PIT LATRINES PROGRAMME FOR
SCHOOLS
60491906 - PRINCIPAL BUILDING AGREEMENT**

Item No	Quantity	Rate	Amount
<u>SECTION NO. 2</u>			
<u>BILL NO. 16</u>			
<u>PROVISIONAL SUMS</u>			
<u>NOTES:</u>			
1. The Contractor's attention is drawn specifically to the Principal Building Agreement Clause 20.0 (Nominated Sub-Contractors), Clause 21.0 (Selected Sub-Contractors) and Clause 22 (Work by Others) and to the related Clauses in Bill No. 1 - Preliminaries 2. The Contractor's attention is drawn also to the definition of attendance on Nominated or Selected Sub-Contractors and of fuel, power and water for commissioning of mechanical and other specialised installations given in the JBCC Preliminaries 3. Where special attendance includes the provision of hoisting facilities for a Sub-Contractor then the Contractor shall: * Ensure that the capacities of his hoisting equipment are sufficient to deal with the masses and the quantities of the items to be hoisted * Schedule the times of availability of the hoisting equipment for each Sub-Contractor * Provide all necessary personnel to operate the hoisting equipment all to enable the Sub-Contractor to execute the hoisting or lowering of his material, etc. using the facilities provided by the Contractor 4. Under no circumstances may any Prime Cost - Provisional Amount, etc. be extended at an amount lower than the amount given in this Bill			
<u>BUDGETARY ALLOWANCES</u>			
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Section No. 2 Bill No. 16 Provisional Sums ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT			

Temporary Ablutions

- | | |
|---|--|
| 1 | Allow a budgetary amount of R250 000.00 (Two Hundred and Fifty Thousand Rand) for the provision of temporary ablutions |
|---|--|

Item

Earthing

- | | |
|---|---|
| 2 | Allow a budgetary amount of R50 000.00 (Fifty Thousand Rand) for the Earthing |
|---|---|

Item

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Section No. 2

Bill No. 16

Provisional Sums

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

Section No. 2

Bill No. 16

Provisional Sums

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Bill No. 16

Provisional Sums

**ERADICATION OF PIT LATRINES PROGRAMME FOR
SCHOOLS**

60491906 - PRINCIPAL BUILDING AGREEMENT

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4	Masonry	57	
5	Waterproofing	60	
6	Roof Coverings	64	
7	Carpentry and Joinery	68	
8	Ironmongery	73	
9	Metalwork	76	
10	Plastering	79	
11	Tiling	80	
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Section No. 2 ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT			

Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>BILL NO. 1</u>				
<u>EARTHWORKS (PROVISIONAL)</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.104 for Haylett formula purposes				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Nature of the ground</u>				
The Tenderer shall acquaint himself by personal examination of the nature of the ground. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" and where conditions of a more difficult character are indicated these are separately measured				
<u>Excavation for working space in rock</u>				
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				
<u>Bulking</u>				
No allowance is made in the measurements below for bulking				
<u>Carting away of excavated material</u>				
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				
Section No. 3 Bill No. 1 Earthworks (Provisional) ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

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 necessary multiple handling of material

Testing

Prices for filling are to include for all necessary density tests in accordance with SANS 1200

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Section No. 3

Bill No. 1

Earthworks (Provisional)

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

<u>DEMOLITIONS ETC</u>				
<u>Demolishing and removing buildings with roof, comprising concrete footings, surface beds, external block walls, roof coverings, sanitary fittings, etc. complete including breaking up reinforced concrete pit cover slab, filling up pit with granular material, sealing off and carting away debris</u>				
1	Single storey building approximately 6 500 x 3 600mm, complete	No	4	
<u>The following in existing septic tank, pit latrines, etc:</u>				
2	Remove sludge, dispose to a dumping area to be located by the specialist Contractor for the Truck capacity of 3000 - 7000 Litre	TRIP	10	
<u>TEMPORARY BARRIERS, SCREENS, ETC</u>				
<u>Temporary barriers, screens, etc including removal</u>				
3	Hoarding 2100mm high formed of suitable timber framing with 0,58mm corrugated iron sheet nailed on	m	102	
<u>SITE CLEARANCE ETC</u>				
<u>Site clearance</u>				
4	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m2	447	
Carried to Collection				
Section No. 3 Bill No. 1 Earthworks (Provisional) ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				
			R	

BULK EXCAVATION, FILLING, ETC

EXCAVATIONS ETC

Open face excavation in earth over sloping site

5	Open face excavation	m3	20
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Extra over bulk excavations in earth for excavation in

6	Soft rock	m3	2
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7	Hard rock	m3	1
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Keeping excavations free of water

8	Keeping excavations free of water (other than subterranean water)		Item
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FILLING ETC

Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 90% Mod AASHTO density

9	Over site to form platforms	m3	20
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G7 Earth filling supplied by the contractor, compacted to 93% Mod AASHTO density

10	Over site to form platforms	m3	115
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Prescribed density tests on filling

11	"Modified AASHTO Density" test		Item
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Bill No. 1

Earthworks (Provisional)

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

EXCAVATION, FILLING, ETC

EXCAVATIONS ETC

Excavation in earth not exceeding 2m deep

12	Trenches	m3	77
13	Holes	m3	37

Excavation in earth exceeding 2m and not exceeding 4m deep

14	Latrine pit	m3	335
15	Soft rock	m3	42
16	Hard rock	m3	21

Back excavation of vertical sides of excavation in earth for working space including backfilling compacted to 98% Mod. AASHTO density

17	Exceeding 0.50m and not exceeding 1.50m deep for placing and removing formwork to walls, etc., 200mm away from excavated face	m2	220
18	Exceeding 1.50m and not exceeding 3.00m deep for placing and removing formwork to walls, etc., 200mm away from excavated face	m2	276

Extra over back excavation in earth for working space for excavation in soft rock material

19	Exceeding 0.50m and not exceeding 1.50m deep for placing and removing formwork to walls, strip footing, etc., 200mm away from excavated face	m2	24
20	Exceeding 1.50m and not exceeding 3.00m deep for placing and removing formwork to walls, strip footing, etc., 200mm away from excavated face	m2	34

Extra over back excavation in earth for working space for excavation in hard rock material

21	Exceeding 0.50m and not exceeding 1.50m deep for placing and removing formwork to walls, strip footing, etc., 200mm away from excavated face	m2	13
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ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

22	Exceeding 1.50m and not exceeding 3.00m deep for placing and removing formwork to walls, strip footing, etc., 200mm away from excavated face	m2	18
	<u>Risk of collapse of excavations</u>		
23	Sides of trench and hole excavations not exceeding 1,5m deep	m2	250
24	Sides of trench and hole excavations exceeding 1,5m deep	m2	301
	<u>Extra over all excavations for carting away</u>		
25	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor	m3	432
	<u>Keeping excavations free of water</u>		
26	Keep excavations free of water (other than subterranean water)		Item
	<u>De-watering of seepage water and water from other sub-soil sources</u>		
27	Dewatering system for removal of seepage water and water from other subterranean sources in the excavations designed and executed by the contractor including all temporary pipes, drainage sumps, silt trap, connections, well points, etc		Item
	<u>FILLING ETC</u>		
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site stabilised with 8% cement per volume, compacted to 98% Mod AASHTO density</u>		
28	Backfilling to trenches, etc	m3	45
	<u>G6 Earth filling supplied by the Contractor and brought to site and compacted to 98% Mod AASHTO density</u>		
29	Under floors, steps, pavings, etc	m3	60
	<u>Soil supplied by the contractor stabilised with 5% cement per volume, compacted to 100% Mod AASHTO density</u>		
30	Backfilling behind pit walls, etc	m3	145

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Bill No. 1
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ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS
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Earthworks (Provisional)

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Earthworks (Provisional)

**ERADICATION OF PIT LATRINES PROGRAMME FOR
SCHOOLS**

60491906 - PRINCIPAL BUILDING AGREEMENT

Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>BILL NO. 2</u>				
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Concrete</u>				
All concrete work shall be done in accordance with the latest edition of SABS 1200G, excluding clause 8				
<u>Formwork</u>				
Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use				
Formwork to soffits of solid slabs, etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described				
Formwork has been measured to the sides of all reinforced concrete in foundations and will be remeasured according to actual usage. However, 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"				
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Section No. 3 Bill No. 2 Concrete, Formwork and Reinforcement ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

Cost of tests

All concrete is to be tested in accordance with SANS 2001-CC1 and shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the principal agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the principal agent

CONCRETE

NOTE: Unless otherwise stated herein, all items in this section shall be deemed to fall into Work Group No.110 for Haylett formula purposes

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Concrete, Formwork and Reinforcement

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

**UNREINFORCED CONCRETE CAST AGAINST
EXCAVATED SURFACES**

15MPa/19mm concrete

1	Surface blinding under footings and bases	m3	11
2	Filling in cavity walls	m3	25

**REINFORCED CONCRETE CAST AGAINST
FORMWORK**

30MPa/19mm concrete

3	Strip footings	m3	25
4	Foundation beams	m3	13
5	Bases	m3	75
6	Ramps	m3	3
7	Sloping apron including forming falls	m3	15
8	Surface beds cast in panels on waterproofing	m3	22
9	Slabs including beams and inverted beams	m3	26

TEST BLOCKS

Test blocks

10	Allow for all necessary concrete test cubes size 150 x 150 x 150mm cast from batches of concrete set of three, made, stored, cured and tested in accordance with SANS 2001-CC1, including use of approved cube moulds, transporting to an approved testing laboratory for testing, paying all charges and submitting reports to the Structural Engineer. (Provisional)	Sets	25
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CONCRETE SUNDRIES

Finishing top surfaces of concrete smooth with a wood float

11	Surface beds, slabs, bases, etc	m2	327
12	Surface beds, slabs, apron, etc to falls	m2	114

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Concrete, Formwork and Reinforcement

**ERADICATION OF PIT LATRINES PROGRAMME FOR
SCHOOLS**

60491906 - PRINCIPAL BUILDING AGREEMENT

SLEEVES

Plastic sleeves for pipes cast in concrete slabs not exceeding 300mm long

13	110mm Sleeve	No	26
14	250mm Sleeve	No	26

Core drilling of holes for pipes exceeding 200mm and not exceeding 250mm diameter

15	255mm Thick reinforced concrete slab, beam, wall, etc	No	5
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FORMWORK

NOTE: Unless otherwise stated herein, all items in this section shall be deemed to fall into Work Group No. 111 for Haylett formula purposes

ROUGH FORMWORK (DEGREE OF ACCURACY II)

Rough formwork to sides

16	Bases	m2	29
17	Strip foundations	m2	65
18	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	127
19	Edges of surface bed panels, ramps, etc not exceeding 300mm high or wide	m	536

ROUGH FORMWORK (DEGREE OF ACCURACY II)

Rough formwork to soffits

20	Soffit of slab not exceeding 250mm thick propped up exceeding 1.5m and not exceeding 3.5m	m2	74
21	Soffit of slab exceeding 250mm not exceeding 500mm thick propped up exceeding 1.5m and not exceeding 3.5m	m2	34

MOVEMENT JOINTS, ETC

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ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

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	<u>Expansion joints with 10mm Jointex between vertical concrete and brick surfaces</u>		
22	Not exceeding 300mm wide	m	198
	<u>Saw cut joints</u>		
23	3 x 40mm Saw cut joints in top of concrete	m	65
	<u>REINFORCEMENT (PROVISIONAL)</u>		
	NOTE: Unless otherwise stated herein, all items in this section shall be deemed to fall into Work Group No. 114 for Haylett formula purposes		
	<u>High tensile and mild steel reinforcement to structural concrete work</u>		
24	Various diameter reinforcing bars	t	11.704
	<u>High tensile steel dowel bars</u>		
25	16mm Diameter dowel bar 500mm long with one end embedded 250mm deep in side of concrete at expansion joint and other end greased and wrapped in polythene sheeting, including hole through formwork	No	71
	<u>Fabric reinforcement</u>		
26	Type 193 fabric reinforcement in surface beds, etc	m2	317
27	Type 395 fabric reinforcement in surface beds, etc	m2	214

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Concrete, Formwork and Reinforcement

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Concrete, Formwork and Reinforcement

**ERADICATION OF PIT LATRINES PROGRAMME FOR
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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 3</u>			
	<u>BILL NO. 3</u>			
	<u>PRECAST CONCRETE</u>			
	NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation			
	NOTE: Unless otherwise stated herein, all items in this Bill shall be deemed to fall into Work Group No.112 for Haylett Formula purposes			
	NOTE: All precast/prestressed concrete shall be in accordance with SANS 2001-CC1			
	<u>PRECAST CONCRETE</u>			
	<u>Precast concrete slab for toilet pedestal</u>			
1	470 x 600 x 150mm Thick reinforced slab including 250mm diameter opening	No	21	
	<u>Prefabricated pre-stressed concrete ribs</u>			
2	990 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	12	
3	1 045 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	10	
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	Precast Concrete			
	ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS			
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4	1 265 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	29	
5	1 320 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	8	
6	1 820 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	5	
7	2 240 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	5	
8	220 x 100mm Pre-stressed concrete rib in lengths not exceeding 5m	m	34	
9	220 x 100mm Pre-stressed concrete rib in lengths exceeding 5m and not exceeding 7,5m	m	79	
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Precast Concrete

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Precast Concrete

**ERADICATION OF PIT LATRINES PROGRAMME FOR
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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>BILL NO. 4</u>				
<u>MASONRY</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.118 for Haylett Formula purposes				
NOTE: All masonry shall be in accordance with SANS 2001-CM1				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Sizes in descriptions</u>				
Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick				
<u>Hollow walls</u>				
Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole				
<u>Bagged and sealed walls</u>				
Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats bitumen emulsion waterproofing coating				
<u>Face bricks</u>				
Bricks shall be ordered timeously to obtain uniformity in size and colour				
Carried to Collection				
Section No. 3				
Bill No. 4				
Masonry				
ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS				
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<u>Pointing</u>				
Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc				
<u>BRICKWORK</u>				
<u>FOUNDATIONS (PROVISIONAL)</u>				
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar</u>				
1	Piers	m3	3	
2	One brick walls	m2	143	
3	330mm Hollow walls of two half brick skins including wire ties	m2	239	
<u>SUPERSTRUCTURE</u>				
<u>Brickwork of NFP bricks in class II mortar</u>				
4	Piers	m3	5	
5	Half brick walls	m2	121	
6	Half brick walls in beamfilling	m2	21	
7	One brick walls	m2	408	
<u>BRICKWORK SUNDRIES</u>				
<u>Bagging of 1:3 cement and sand mixture</u>				
8	On brick walls, piers, etc	m2	533	
<u>Movement joints with "Jointex" between horizontal concrete and brick surfaces</u>				
9	10mm Joints not exceeding 300mm wide	m	250	
<u>Brickwork reinforcement</u>				
10	75mm Wide reinforcement built in horizontally	m	799	
11	150mm Wide reinforcement built in horizontally	m	3 028	
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Masonry				
ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS				
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FACE BRICKWORK

Face brickwork to be "Corobrik®" Firelight Satin FBX of 20-30MPa nominal compressive strength in Class II mortar with recessed horizontal and recessed vertical joints

16	Extra over NFX brickwork for face brickwork in foundations (Provisional)	m2	92
17	Extra over NFP brickwork for face brickwork	m2	410
18	Extra over NFP brickwork for brick-on-edge header course lintels 1 course high, pointed on face and 115mm soffit	m	80
	<u>Brick-on-edge header course copings, sills, etc of "Corobrik® Firelight Satin FBX" face bricks, pointed with recessed joints on all exposed faces</u>		
19	170mm Wide sills set level and slightly projecting	m	32

FIBRE CEMENT WINDOW CILLS

Natural grey sills in single lengths bedded in class II mortar including metal fixing lugs etc

20	12 x 150mm Wide sills set flat and slightly projecting	m	32
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Carried to Collection

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Section No. 3

Bill No. 4

Masonry

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

Section No. 3

Bill No. 4

Masonry

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Bill No. 4

Masonry

**ERADICATION OF PIT LATRINES PROGRAMME FOR
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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>BILL NO. 5</u>				
<u>WATERPROOFING</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 120 for Haylett formula purposes				
<u>DAMP PROOFING OF WALLS AND FLOORS</u>				
<u>One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B)</u>				
1	In walls	m2	56	
2	Under slabs on brickwork	m	172	
<u>Two coats of "Brixéal" or other approved bitumen waterproofing coating</u>				
3	On bagged brick walls	m2	265	
<u>One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape</u>				
4	Under surface beds	m2	110	
<u>JOINT SEALANTS</u>				
<u>Pre-compressed bitumen impregnated foam plastic joint sealing strips</u>				
5	10 x 10mm In joints between frames and walls	m	417	
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Section No. 3 Bill No. 5 Waterproofing ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

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Bill No. 5

Waterproofing

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Bill No. 5

Waterproofing

**ERADICATION OF PIT LATRINES PROGRAMME FOR
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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>BILL NO. 6</u>				
<u>ROOF COVERINGS</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.124 for Haylett Formula purposes				
NOTE: All roof covering to be installed to manufacturers detail and applicable SANS codes. All roof sheeting shall be laid under a 5 year written guarantee for site workmanship and watertightness				
Carried to Collection				R
Section No. 3 Bill No. 6 Roof Coverings ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

PROFILED METAL SHEETING AND ACCESSORIES

0,53mm "Chromadek" or other approved, Colomate finish galvanised metal IBR profile roof sheeting at 17.5 degrees fixed to intermediate timber purlins at 1 250mm centres and to ridge and eaves with minimum 50mm sheeting end overlaps, all in accordance with architects drawings and manufacturer's specifications

1	Roof covering with pitch not exceeding 25 degrees fixed to timber purlins at maximum 1200mm centres with a minimum of 50mm sheeting projection beyond purlins at eaves.	m2	248
2	Extra over IBR metal roof covering for OPAL Glass fibre reinforced polyster (weight 2,4kg/m ²) roof sheeting fixed with 65 mm galvanised Tek screws and newway seals in alternate sheets between galvanised metal sheet.	m2	98
	<u>0,53mm "Chromadek" or other approved, Colomate finish galvanised metal ridge cap with and including ridge closer, all in accordance with architects drawings and manufacturer's specifications</u>		
3	Ridge capping	m	52
4	Counter flashing 70mm girth	m	107
	<u>"Sondor" or other approved corrugated polycloser</u>		
5	Under ridge capping	m	54
6	On beamfilling	m	158

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Section No. 3

Bill No. 6

Roof Coverings

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

ROOF AND WALL INSULATION

Sisalation® 420 Heavy industrial grade reinforced aluminium foil insulation double sided, heavy grammage reflective foil laminate incorporating eight layers of aluminium foil, reinforcing scrim, Kraft paper and polyethylene, tested for conformance with SANS 1381-4:2009, with a Class 1 fire rating in accordance with SANS 10177 - 3:2005 and BS 476 part 5, 6 and 7, drawn tautly across rafters and secured to each rafter with 38mm x 3.2mm x 1100mm hardboard counter batten strips positioned flush with the bottom edge of the material thus leaving 150mm overlap exposed at the top for the next layer and 150mm overlap thereafter on each 1 250mm width roll

- 7 Insulation laid taut over rafters and under purlins (at approximately 1 250mm centres) including galvanised steel straining wires

m2

248

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Section No. 3

Bill No. 6

Roof Coverings

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

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Section No. 3

Bill No. 6

Roof Coverings

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Bill No. 6

Roof Coverings

**ERADICATION OF PIT LATRINES PROGRAMME FOR
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60491906 - PRINCIPAL BUILDING AGREEMENT

Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO. 3</u>				
	<u>BILL NO. 7</u>				
	<u>CARPENTRY AND JOINERY</u>				
	NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
	NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 126 for Haylett Formula purposes				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>Roof Trusses:</u>				
	The following is applicable in respect of plate nailed roof trusses:				
	Trusses are at maximum 1000mm centres. Roof covering is 0,50mm colomate galvanised metal IBR on timber purlins				
	The dimensions in the descriptions of the trusses are nominal and actual measurements are to be obtained from the Architect and/or on site before design or fabrication commences				
	<u>TIMBER ROOF CONSTRUCTION</u>				
	<u>Design Responsibility</u>				
	The contractor shall be responsible for the design of the timber roof construction. The contractor will submit shop drawings for approval by the principal agent within two weeks after the date of tender closing. Appointment of the successful tenderer will be subject to approval of the timber roof construction. The contractor shall commence manufacturing only after written approval of shop drawings from the principal agent				
	Carried to Collection				
	Section No. 3 Bill No. 7 Carpentry and Joinery ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				
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	<u>"TDM" or similar approved "Saligna BB" doors hung to steel frames (elsewhere measured)</u>				
9	44mm Framed, ledged and braced batten door size 813 x 2040mm high of SA Pine sub-frame with double top and bottom rails, 20 x 150mm middle ledge, 20 x 225mm bottom ledge and 20 x 110mm braces, filled in with tongued and grooved boarding in V-joint rail (D2)	No	5		
10	Ditto, 44mm Framed, ledged and braced batten door size 997 x 2040mm high of SA Pine sub-frame with double top and bottom rails, 20 x 150mm middle ledge, 20 x 225mm bottom ledge and 20 x 110mm braces, filled in with tongued and grooved boarding in V-joint rail (D3)	No	2		
	<u>FRAMED, FRAMES, ETC</u>				
	<u>Wrought softwood</u>				
11	60 x 50mm Rebated and angle rounded frame bolted to wall with heads of bolts sunk and pelleted	m	132		
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Section No. 3 Bill No. 7 Carpentry and Joinery ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT					

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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u> <u>BILL NO. 8</u> <u>IRONMONGERY</u> NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 132 for Haylett Formula purposes				
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Section No. 3 Bill No. 8 Ironmongery ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

SUPPLEMENTARY PREAMBLES

Proprietary items

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

Prices are to be based on the specific products/articles specified. If tenderers wish to offer alternative products/articles for certain items, these items are to be clearly marked and the alternative specification given with supporting brochures etc clarifying the features of the products/articles offered

On request returnable samples are to be provided to the principal agent for consideration

Finishes to ironmongery

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

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

HINGES, BOLTS, ETC

Manufactured by "Union" or similar approved

Manufactured by "Union" or similar approved

1	100 x 75mm Medium duty brass butt hinge	No	104
2	100 x 75mm Two ball bearing butt hinge (Code 8352-100 SB)	No	52
3	50 x 25mm LD polished barrel bolt	No	20

CATCHES, CABIN HOOKS, ETC.

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Bill No. 8

Ironmongery

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

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HANDLES

Manufactured by "Dorma" or similar approved

- | | | | |
|---|---|----|----|
| 9 | "CB30" Lever handle on rectangular Euro cylinder back plate 61cm centres. | No | 15 |
|---|---|----|----|

PHOTOLUMINESCENT SIGNS

SUPPLEMENTARY PREAMBLES

Signs are to comply with SANS 1186-1 to 5 and to be to the approval of the local authority. Signs are to have anodised aluminium frames

Prices are to include for fixing by approved methods. The use of double sided tape will not be permitted. Surface mounted signs are to be concealed fixed

Samples, specifications, literature, etc of materials and fabricated articles the tenderer proposes to use shall be submitted with the tender

A ten year guarantee on materials and workmanship shall be submitted by the successful tenderer

Wall mounted photoluminescent statutory signs

- | | | | |
|----|---------------------------|----|---|
| 10 | 180 x 180mm Female Sign | No | 4 |
| 11 | 180 x 180mm Disabled Sign | No | 1 |
| 12 | 180 x 180mm Male Sign | No | 4 |

BATHROOM ACCESSORIES

Manufactured by "Franke" or similar approved

- | | | | |
|----|---|----|----|
| 13 | "BS677" Stainless steel toilet roll holder, plugged and screwed to wall with stainless steel screws | No | 3 |
| 14 | "Halcast No. 366" Chromium plated toilet roll holder, plugged and screwed to wall with stainless steel screws | No | 22 |

Manufactured by "She Bin" or similar approved

- | | | | |
|----|-----------------------------|----|----|
| 15 | Feminine hygiene pedal bins | No | 13 |
|----|-----------------------------|----|----|

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Ironmongery

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Ironmongery

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Ironmongery

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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>BILL NO. 9</u>				
<u>METALWORK</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.136 for Haylett formula purposes				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Descriptions</u>				
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				
Galvanising must comply to: SANS 121-ISO 1461 & SANS 32-EN 10240 and SANS 14713-ISO 14713 for Hot Dip galvanising on iron and steel articles				
<u>Door frames</u>				
Pressed steel door frames shall be supplied with one pair of 100mm galvanised steel loose pin hinges				
<u>Galvanised steel windows</u>				
Windows shall be provided with polished brass fittings				
Only window openings shall be fitted with horizontal 8mm square burglar bars at maximum 150mm centres				
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Metalwork				
ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS				
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Courses adjacent to window jambs are to have cores filled allowing fixing lugs to be built-in

GALVANISED MILD STEEL GATES, SCREENS, ETC.

Welded gate and frame

- | | |
|---|---|
| 1 | Single gate 900 x 2100mm high of 25mm steel tubing and fitted with a pair of suitable hinges welded to post and with ears for padlock (G1) |
| 2 | Double gate 1800 x 2100mm high of 25mm steel tubing and fitted with a pair of suitable hinges welded to post and with ears for padlock (G2) |

No 5

No 1

GALVANISED PRESSED STEEL DOOR FRAMES

1,2mm Rebated frames suitable for one brick walls

- | | |
|---|----------------------------------|
| 3 | Frame for door 813 x 2032mm high |
|---|----------------------------------|

No 25

GALVANISED STEEL WINDOWS, DOORS, ETC

Purpose made steel windows with 8mm burglar bars to opening sashes

- | | |
|---|--|
| 4 | Window (W01) overall size 889 x 457mm high |
|---|--|

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Bill No. 9

Metalwork

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

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Bill No. 9

Metalwork

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Bill No. 9

Metalwork

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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>BILL NO. 10</u>				
<u>PLASTERING</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 142 for Haylett formula purposes				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Testing of sand/cement screeds:</u>				
Testing to be done by an accredited independent testing specialist, or by the provision of independently certified test date to demonstrate compliance with the Specification as set out below				
Testing to include both light tap and heavy weight impact using a 4kg mass in compliance with the BRE screed tester requirements				
Maximum indentation not to exceed 3mm				
Alternative substrate testing methods may be put forward for consideration and acceptance by the Principal Agent				
All test results to be provided in Microsoft Excel format with unique numbers and the positions of tests referenced and indicated on a floor plan (floor plan to be provided by Principal Agent.)				
In all instances of results failing to comply as determined by the Principal Agent, additional tests to prove final compliance will be for the account of the contractor				
<u>EPOXY FLOOR COATINGS</u>				
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Section No. 3 Bill No. 10 Plastering ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

	<u>2 Part "Sikafloor 161" epoxy primer with "Sikafloor 264" seal coat (colour: Grey) as per manufacturer's specifications</u>				
	<u>2 Part "Sikafloor 161" epoxy primer with "Sikafloor 264" seal coat (colour: Grey) as per manufacturer's specifications</u>				
1	On screeded floors	m2	170		
2	Skirtings 60mm high	m	195		
	<u>SCREEDS</u>				
	<u>Screeds on concrete</u>				
3	30mm Thick on narrow widths	m2	3		
4	30mm Thick on floors and landings	m2	216		
	<u>INTERNAL PLASTER</u>				
	<u>Cement plaster on brickwork</u>				
5	On walls	m2	613		
6	On narrow widths	m2	57		
	<u>SPECIALISED PLASTER TYPE WALL COATINGS</u>				
	<u>15mm Thick impermeable plaster mixed with silicite sealing agent applied in strict accordance with manufacturer's specifications, on brickwork</u>				
7	On walls	m2	313		
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Section No. 3					
Bill No. 10					
Plastering					
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Bill No. 10

Plastering

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Bill No. 10

Plastering

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Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO. 3</u> <u>BILL NO. 11</u> <u>TILING</u> NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 144 for Haylett formula purposes <u>SUPPLEMENTARY PREAMBLES</u> <u>Fixing</u> Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding Tiling described as "fixed with adhesive on power floated concrete" shall be deemed to include for approved tiling key-coat Ceramic, porcelain, marble and granite tiles are to be fixed and grouted with suitable adhesives and grouts from the "Tal Professional" ("Ceresit Tylon"?) range of products as recommended by the manufacturer of the tiles <u>WALL TILING</u> <u>200 x 200 x 5mm White glazed ceramic tiles fixed with an approved adhesive to plaster (plaster elsewhere)</u>				
1	On walls in isolated panels, splashbacks, etc	m2	16		
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<u>SECTION NO. 3</u> <u>BILL NO. 12</u> <u>PLUMBING AND DRAINAGE</u> <u>(PROVISIONAL)</u> NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.148 for Haylett formula purposes <u>SUPPLEMENTARY PREAMBLES</u> <u>Wire gratings</u> Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings <u>Stormwater channels</u> Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc, and disposal of surplus material on site <u>Septic tanks</u> Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site <u>Sealing of edges</u> Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone				
Carried to Collection				R
Section No. 3 Bill No. 12 Plumbing and Drainage (Provisional) ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

uPVC pipes and fittings

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

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

uPVC pressure pipes and fittings

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

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

Copper pipes

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

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

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing" and only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained

Carried to Collection

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Section No. 3

Bill No. 12

Plumbing and Drainage (Provisional)

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

Fixing of pipes

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

Paper wrapping to pipes

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

Disinfection of water pipework

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

Laying, backfilling, bedding, etc of pipes

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

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

SANS 1200L : Medium-pressure pipelines

SANS 1200LD : Sewers

SANS 1200LE : Stormwater drainage

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

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

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

General

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 93% Mod AASHTO density and disposal of surplus material on site

Carried to Collection

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Section No. 3

Bill No. 12

Plumbing and Drainage (Provisional)

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

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

Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured)

As-built drawings

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

RAINWATER GOODS

uPVC gutters and rainwater pipes

1	110mm Half-round roof gutters	m	165
2	Extra over gutter for stopped end	No	38
3	Extra over gutter for outlet for 110mm pipe	No	26
4	75mm Diameter rainwater pipes	m	76
5	Extra over rainwater pipe for bend	No	34
6	Extra over rainwater pipe for shoe	No	20
7	Extra over rainwater pipe for swan-neck	No	20

SANITARY FITTINGS

"Atlas Plastics" or similar approved

8	"Bowl" urinal (code: 507AP) fixed to wall with and including matching brackets complete	No	6
9	"Christy" wash hand basin with splashback (code: 383AP) polyethylene wash hand basin size 570 X 395mm (colour: granite) fixed to wall with and including cast iron brackets	No	16
10	"VIP 200" low level floor mounted WC pedestal (code: 222AP) complete with flap and incorporated seat	No	21

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Section No. 3

Bill No. 12

Plumbing and Drainage (Provisional)

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

WASTE UNIONS ETC

"Atlas Plastics" or similar approved

11	Waterless urinal fitting and waste (code: 496AP)	No	6
----	--	----	---

"Cobra Watertech" or similar approved

12	32mm Basin waste union (code: 303) including plug and chain	No	21
----	---	----	----

TRAPS, ETC.

"Marley" or similar approved

13	50mm PVC trap (code: ETPA10)	No	21
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TAPS, VALVES, ETC

"Cobra Watertech" or similar approved

14	15mm 111-15 Pillar taps fitted with restriction washer, one tap hole stopper	No	21
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15	15mm 111-041 Medical elbow action pillar tap with flanged backnut fitted with restriction washer and one tap hole stopper	No	3
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16	15mm 1003/125 Brass fullway wheelhead gate valve	No	21
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"Plumpride" or similar approved

17	15mm Plastic bib tap	No	9
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VENT PIPES, ETC

"SWAN plastics" or similar approved black PVC UV stabilized vent pipes

18	110mm Vent pipe with and including holderbats screwed to walls	m	122
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Extra over black PVC UV stabilized vent pipe for fittings

19	110mm Sockets to be cut off and used to fix shade cloth over vent pipe (elsewhere measured).	No	21
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20	110mm PVC single socket cast into slab for 110mm vent pipe (elsewhere measured)	No	21
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Carried to Collection

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Section No. 3

Bill No. 12

Plumbing and Drainage (Provisional)

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

21	110mm pipe x 130mm Long welded to socket to form hole through slab.	No	21	
22	55% Black shade cloth to top of vent pipe (elsewhere measured)	No	21	
	<u>Sundries</u>			
23	Provide all necessary apparatus, water, etc, for and test the whole of the Sanitary Plumbing to the satisfaction of the Architect and Local Authority and replace any defective work free of charge and leave perfect (PIT)	No	6	
	<u>SANITARY PLUMBING</u>			
	NOTE: Unless otherwise stated herein, all items in this section shall be deemed to fall into Work Group No. 146 for Haylett formula purposes			
	<u>Class 34 uPVC pipes</u>			
24	50mm Pipes	m	152	
25	110mm Pipes	m	10	
	<u>Class 34 uPVC pipes chased in walls, etc including supports</u>			
26	50mm Pipes	m	6	
27	110mm Pipes	m	5	
	<u>Extra over uPVC pipes for</u>			
28	50mm Access bend	No	43	
29	50mm Access junction	No	22	
30	50mm Bend	No	92	
31	50mm Junction	No	34	
32	110mm Bend	No	6	
33	110mm Junction	No	3	
34	110mm Access bend	No	3	
35	110mm Access junction	No	3	
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36	110mm Pan connector	No	3
37	110mm "GI Two-way" vent valve	No	3
<u>WATER SUPPLIES</u>			
<u>Class II copper pipes</u>			
38	15mm Pipes	m	41
39	22mm Pipes	m	96
<u>Class II copper pipes chased in walls</u>			
40	15mm Pipes	m	4
41	22mm Pipes	m	1
<u>Extra over class II copper pipes for solvent welded fittings</u>			
42	15mm fittings	No	95
43	22mm fittings	No	53
<u>TANKS, ETC</u>			
<u>"Jo-jo" or similar approved</u>			
44	5000 litre Low profile water tank with and including 4mm galvanised wire looped double to top of tank and anchored to top of slab with Y10 rod cast into slab at all four corners, including 15mm standard garden hose to isolate wire and prevent damage to tank or other approved holding down material secured around tank and to concrete pedestal	No	4
45	3mm Thick galvanised plate with and including 23mm hole to be bolted onto edge of concrete slab with 2 x 8mm raw bolts	No	4
46	20mm "Cobra" 541 tank locking tap fitted to a 22mm extension pipe with barrel nipple and galvanised socket	No	4

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Section No. 3
Bill No. 12
Plumbing and Drainage (Provisional)
ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS
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Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO. 3</u>				
	<u>BILL NO. 13</u>				
	<u>GLAZING</u>				
	NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
	NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.150 for Haylett formula purposes				
	<u>GLAZING TO STEEL WITH PUTTY</u>				
	<u>6.38mm Arctic Snow Laminated Safety Glass</u>				
1	Panes exceeding 0,1m ² and not exceeding 0,5m ²	m2	20		
	<u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u>				
	<u>6mm Silvered float glass copper backed mirror with polished edges, holed for and fixed with chromium plated dome capped screws with rubber buffers to plugs in brickwork or concrete</u>				
2	Mirror 300 x 600mm high with dome capped screws	No	13		
	Carried Forward to Summary of Section No. 3			R	
	Section No. 3				
	Bill No. 13				
	Glazing				
	ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS				
	60491906 - PRINCIPAL BUILDING AGREEMENT				

Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO. 3</u>				
	<u>BILL NO. 14</u>				
	<u>PAINTWORK</u>				
	NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
	NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 152 for Haylett formula purposes				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>PROPRIETY ITEMS OR MATERIALS</u>				
	Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Head: Public Works				
	<u>COLOURS</u>				
	Unless otherwise described all paintwork shall be deemed to have a colour value in excess of 7 on the Munsell system in accordance with SANS 1091				
	<u>PAINTWORK ETC TO NEW WORK</u>				
	<u>ON INTERNAL FLOATED PLASTER SURFACES</u>				
	<u>One coat alkali resistant primer and two coats PVA emulsion paint for interior use</u>				
1	Walls	m2	722		
	<u>ON FIBRE-CEMENT BOARD SURFACES</u>				
	<u>One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use</u>				
	Cills	m	35		
	Carried to Collection				
	Section No. 3				
	Bill No. 14				
	Paintwork				
	ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS				
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60491906 - PRINCIPAL BUILDING AGREEMENT

Section No. 3

Bill No. 14

Paintwork

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Bill No. 14

Paintwork

**ERADICATION OF PIT LATRINES PROGRAMME FOR
SCHOOLS**

60491906 - PRINCIPAL BUILDING AGREEMENT

Item No	Quantity	Rate	Amount
SECTION NO. 3			
BILL NO. 15			
EXTERNAL WORKS (PROVISIONAL)			
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.146 for Haylett formula purposes			
SUPPLEMENTARY PREAMBLES			
<u>Stormwater channels</u>			
Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 95% Mod AASHTO density and disposal of surplus material on site			
<u>General</u>			
Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 93% Mod AASHTO density and disposal of surplus material on site			
<u>WALKWAYS AND PRECAST CONCRETE STEPS</u>			
<u>The following in walkways:</u>			
<u>Excavation in earth not exceeding 2m deep</u>			
1	Reduced levels under floors	m3	49
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Section No. 3 Bill No. 15 External Works (Provisional) ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT			

	<u>Extra over channel excavations in earth for excavation in</u>				
2	Soft rock	m3	4		
3	Hard rock	m3	2		
	<u>Risk of collapse of excavations</u>				
4	Sides of excavations not exceeding 1.5m deep	m2	45		
	<u>Extra over all excavations for carting away</u>				
5	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor	m3	38		
	<u>Keeping excavations free of water</u>				
6	Keep excavations free of water (other than subterranean water)			Item	
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site stabilised with 8% cement per volume, compacted to 98% Mod AASHTO density</u>				
7	Backfilling to trenches, etc	m3	3		
	<u>G7 Earth filling supplied by the contractor, compacted to 93% Mod AASHTO density</u>				
8	Under floors, steps, pavings, etc	m3	24		
	<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 90% Mod AASHTO density	m2	162		
	<u>Weedkiller (active ingredients metalaclor 102,8 g/l, terbitilasien 248,6 g/l and atrasién 248,6 g/l) mixed in the proportion of 100 ml weedkiller to 100 l water and applied at a rate of 10 l/m²</u>				
10	Under paving etc	m2	162		
	<u>25MPa/19mm concrete</u>				
11	Pavings cast in panels	m3	22		
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	<u>Test blocks</u>		
12	Allow for all necessary concrete test cubes size 150 x 150 x 150mm cast from batches of concrete set of three, made, stored, cured and tested in accordance with SANS 2001-CC1, including use of approved cube moulds, transporting to an approved testing laboratory for testing, paying all charges and submitting reports to the Structural Engineer. (Provisional)	Sets	5
	<u>Finishing top surfaces of concrete smooth with a wood float</u>		
13	Surface beds, slabs, apron, etc to falls	m2	162
	<u>Rough formwork to sides</u>		
14	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	180
	<u>Expansion joints with 12mm softboard (bitumen impregnated softboard) between vertical concrete surfaces, including necessary formwork</u>		
15	Not exceeding 300mm high through slabs	m	105
	<u>Saw cut joints</u>		
16	12 x 100mm Saw cut joints in top of concrete	m	105
	<u>Fabric reinforcement</u>		
17	Type 193 fabric reinforcement in surface beds, etc	m2	135
	<u>"Thioflex" two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>		
18	12 x 10mm In saw cut joints in floors	m	105

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External Works (Provisional)
ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS
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FENCING

Galvanised mild steel fence with bitumen-aluminium painted (two coats) steel pipe posts, stays, gates, etc including galvanised steel bolts, straining eye bolts, etc, site clearance and preparation of ground

19	Fencing 1 800mm high of 4 strands of galvanised twisted double strand 1.6mm straining wire tied to posts and eye bolts and covered with 50 x 50 x 2.5mm welded wire mesh tied at 150mm centres to each straining wire including 50mm diameter intermediate posts 1500mm long at not exceeding 3000mm centres	m	35
20	Continuous razor wire security roll to top of fence flat wrapped in 700mm diameter rings, tied together and to straining wire at 150mm centres	m	35
21	50mm Diameter inclined stay 1 800mm long, including caps, base plates, concrete base, etc	No	10
22	100mm Diameter straining or corner post 1800mm long, including caps, base plates, concrete base, etc	No	6
23	Gate 1 350mm x 1 800mm high of 50mm diameter framing covered with 50 x 50 x 2.5mm welded wire mesh tied at 150mm centres and steel security spikes screwed to top of gate, including hinges, heavy duty lockable barrel bolt and 63mm brass five-pin tumbler padlock	No	1

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Bill No. 15

External Works (Provisional)

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

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External Works (Provisional)

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Bill No. 15

External Works (Provisional)

**ERADICATION OF PIT LATRINES PROGRAMME FOR
SCHOOLS**

60491906 - PRINCIPAL BUILDING AGREEMENT

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<u>SECTION NO. 3</u>			
<u>BILL NO. 16</u>			
<u>PROVISIONAL SUMS</u>			
<u>NOTES:</u>			
1. The Contractor's attention is drawn specifically to the Principal Building Agreement Clause 20.0 (Nominated Sub-Contractors), Clause 21.0 (Selected Sub-Contractors) and Clause 22 (Work by Others) and to the related Clauses in Bill No. 1 - Preliminaries 2. The Contractor's attention is drawn also to the definition of attendance on Nominated or Selected Sub-Contractors and of fuel, power and water for commissioning of mechanical and other specialised installations given in the JBCC Preliminaries 3. Where special attendance includes the provision of hoisting facilities for a Sub-Contractor then the Contractor shall: * Ensure that the capacities of his hoisting equipment are sufficient to deal with the masses and the quantities of the items to be hoisted * Schedule the times of availability of the hoisting equipment for each Sub-Contractor * Provide all necessary personnel to operate the hoisting equipment all to enable the Sub-Contractor to execute the hoisting or lowering of his material, etc. using the facilities provided by the Contractor 4. Under no circumstances may any Prime Cost - Provisional Amount, etc. be extended at an amount lower than the amount given in this Bill			
<u>BUDGETARY ALLOWANCES</u>			
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Section No. 3 Bill No. 16 Provisional Sums ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT			

Temporary Ablutions

- | | |
|---|--|
| 1 | Allow a budgetary amount of R300 000.00 (Three Hundred Thousand Rand) for the provision of temporary ablutions |
|---|--|

Item

Earthing

- | | |
|---|---|
| 2 | Allow a budgetary amount of R50 000.00 (Fifty Thousand Rand) for the Earthing |
|---|---|

Item

Carried to Collection

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Section No. 3

Bill No. 16

Provisional Sums

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

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Bill No. 16

Provisional Sums

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Bill No. 16

Provisional Sums

**ERADICATION OF PIT LATRINES PROGRAMME FOR
SCHOOLS**

60491906 - PRINCIPAL BUILDING AGREEMENT

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7	Carpentry and Joinery	135	
8	Ironmongery	140	
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10	Plastering	146	
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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>BILL NO. 1</u>				
<u>EARTHWORKS (PROVISIONAL)</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.104 for Haylett formula purposes				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Nature of the ground</u>				
The Tenderer shall acquaint himself by personal examination of the nature of the ground. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" and where conditions of a more difficult character are indicated these are separately measured				
<u>Excavation for working space in rock</u>				
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				
<u>Bulking</u>				
No allowance is made in the measurements below for bulking				
<u>Carting away of excavated material</u>				
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 Bill No. 1 Earthworks (Provisional) ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

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 necessary multiple handling of material

Testing

Prices for filling are to include for all necessary density tests in accordance with SANS 1200

Carried to Collection

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Section No. 4

Bill No. 1

Earthworks (Provisional)

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

<u>DEMOLITIONS ETC</u>				
<u>Demolishing and removing buildings with roof, comprising concrete footings, surface beds, external block walls, roof coverings, sanitary fittings, etc. complete including breaking up reinforced concrete pit cover slab, filling up pit with granular material, sealing off and carting away debris</u>				
1	Single storey building approximately 4 700 x 3 600mm, complete	No	4	
2	Single storey building approximately 6 800 x 6 800mm, complete	No	1	
<u>The following in existing septic tank, pit latrines, etc:</u>				
3	Remove sludge, dispose to a dumping area to be located by the specialist Contractor for the Truck capacity of 3000 - 7000 Litre	TRIP	6	
<u>TEMPORARY BARRIERS, SCREENS, ETC</u>				
<u>Temporary barriers, screens, etc including removal</u>				
4	Hoarding 2100mm high formed of suitable timber framing with 0,58mm corrugated iron sheet nailed on	m	121	
<u>SITE CLEARANCE ETC</u>				
<u>Site clearance</u>				
5	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m2	482	
<u>BULK EXCAVATION, FILLING, ETC</u>				
<u>EXCAVATIONS ETC</u>				
<u>Open face excavation in earth over sloping site</u>				
6	Open face excavation	m3	72	
<u>Extra over bulk excavations in earth for excavation in</u>				
7	Soft rock	m3	7	
8	Hard rock	m3	4	
Carried to Collection				R
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Earthworks (Provisional)				
ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS				
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<u>EXCAVATION, FILLING, ETC</u>					
<u>EXCAVATIONS ETC</u>					
<u>Excavation in earth not exceeding 2m deep</u>					
13	Trenches	m3	67		
14	Holes	m3	27		
<u>Excavation in earth exceeding 2m and not exceeding 4m deep</u>					
15	Latrine pit	m3	309		
<u>Extra over trench and hole excavations in earth for excavation in</u>					
16	Soft rock	m3	40		
17	Hard rock	m3	20		
<u>Back excavation of vertical sides of excavation in earth for working space including backfilling compacted to 98% Mod. AASHTO density</u>					
18	Exceeding 0.50m and not exceeding 1.50m deep for placing and removing formwork to walls, etc., 200mm away from excavated face	m2	194		
19	Exceeding 1.50m and not exceeding 3.00m deep for placing and removing formwork to walls, etc., 200mm away from excavated face	m2	254		
<u>Extra over back excavation in earth for working space for excavation in soft rock material</u>					
20	Exceeding 0.50m and not exceeding 1.50m deep for placing and removing formwork to walls, strip footing, etc., 200mm away from excavated face	m2	20		
21	Exceeding 1.50m and not exceeding 3.00m deep for placing and removing formwork to walls, strip footing, etc., 200mm away from excavated face	m2	26		
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	<u>Extra over back excavation in earth for working space for excavation in hard rock material</u>				
22	Exceeding 0.50m and not exceeding 1.50m deep for placing and removing formwork to walls, strip footing, etc., 200mm away from excavated face	m2	10		
23	Exceeding 1.50m and not exceeding 3.00m deep for placing and removing formwork to walls, strip footing, etc., 200mm away from excavated face	m2	13		
	<u>Risk of collapse of excavations</u>				
24	Sides of trench and hole excavations not exceeding 1,5m deep	m2	225		
25	Sides of trench and hole excavations exceeding 1,5m deep	m2	252		
	<u>Extra over all excavations for carting away</u>				
26	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor	m3	362		
	<u>Keeping excavations free of water</u>				
27	Keep excavations free of water (other than subterranean water)			Item	
	<u>De-watering of seepage water and water from other sub-soil sources</u>				
28	Dewatering system for removal of seepage water and water from other subterranean sources in the excavations designed and executed by the contractor including all temporary pipes, drainage sumps, silt trap, connections, well points, etc			Item	
	<u>FILLING ETC</u>				
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site stabilised with 8% cement per volume, compacted to 98% Mod AASHTO density</u>				
29	Backfilling to trenches, etc	m3	35		
	<u>G6 Earth filling supplied by the Contractor and brought to site and compacted to 98% Mod AASHTO density</u>				
30	Under floors, steps, pavings, etc	m3	48		
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Earthworks (Provisional)					
ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS					
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Section No. 4

Bill No. 1

Earthworks (Provisional)

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Section No. 4

Bill No. 1

Earthworks (Provisional)

**ERADICATION OF PIT LATRINES PROGRAMME FOR
SCHOOLS**

60491906 - PRINCIPAL BUILDING AGREEMENT

Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u> <u>BILL NO. 2</u> <u>CONCRETE, FORMWORK AND REINFORCEMENT</u> NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation <u>SUPPLEMENTARY PREAMBLES</u> <u>Concrete</u> All concrete work shall be done in accordance with the latest edition of SABS 1200G, excluding clause 8 <u>Formwork</u> Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use Formwork to soffits of solid slabs, etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described Formwork has been measured to the sides of all reinforced concrete in foundations and will be remeasured according to actual usage. However, 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"				
Carried to Collection				R
Section No. 4 Bill No. 2 Concrete, Formwork and Reinforcement ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

Cost of tests

All concrete is to be tested in accordance with SANS 2001-CC1 and shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the principal agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the principal agent

CONCRETE

NOTE: Unless otherwise stated herein, all items in this section shall be deemed to fall into Work Group No.110 for Haylett formula purposes

UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES

15MPa/19mm concrete

1	Surface blinding under footings and bases	m3	12	
2	Filling in cavity walls	m3	24	

Carried to Collection

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Section No. 4

Bill No. 2

Concrete, Formwork and Reinforcement

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

REINFORCED CONCRETE CAST AGAINST FORMWORK

30MPa/19mm concrete

3	Strip footings	m3	22
4	Foundation beams	m3	9
5	Bases	m3	56
6	Ramps	m3	2
7	Sloping apron including forming falls	m3	8
8	Surface beds cast in panels on waterproofing	m3	20
9	Slabs including beams and inverted beams	m3	22

TEST BLOCKS

Test blocks

10	Allow for all necessary concrete test cubes size 150 x 150 x 150mm cast from batches of concrete set of three, made, stored, cured and tested in accordance with SANS 2001-CC1, including use of approved cube moulds, transporting to an approved testing laboratory for testing, paying all charges and submitting reports to the Structural Engineer. (Provisional)	Sets	25
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CONCRETE SUNDRIES

Finishing top surfaces of concrete smooth with a wood float

11	Surface beds, slabs, bases, etc	m2	402
12	Surface beds, slabs, apron, etc to falls	m2	70

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Concrete, Formwork and Reinforcement
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SLEEVES

Plastic sleeves for pipes cast in concrete slabs not exceeding 300mm long

13	110mm Sleeve	No	28
14	250mm Sleeve	No	24
<u>Core drilling of holes for pipes exceeding 200mm and not exceeding 250mm diameter</u>			
15	255mm Thick reinforced concrete slab, beam, wall, etc	No	3

FORMWORK

NOTE: Unless otherwise stated herein, all items in this section shall be deemed to fall into Work Group No. 111 for Haylett formula purposes

ROUGH FORMWORK (DEGREE OF ACCURACY II)

Rough formwork to sides

16	Bases	m2	23
17	Strip foundations	m2	56
18	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	100
19	Edges of surface bed panels, ramps, etc not exceeding 300mm high or wide	m	523

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ROUGH FORMWORK (DEGREE OF ACCURACY II)

Rough formwork to soffits

20	Soffit of slab not exceeding 250mm thick propped up exceeding 1.5m and not exceeding 3.5m	m2	46
21	Soffit of slab exceeding 250mm not exceeding 500mm thick propped up exceeding 1.5m and not exceeding 3.5m	m2	32

MOVEMENT JOINTS, ETC

Expansion joints with 10mm Jointex between vertical concrete and brick surfaces

22	Not exceeding 300mm wide	m	178
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Saw cut joints

23	3 x 40mm Saw cut joints in top of concrete	m	68
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REINFORCEMENT (PROVISIONAL)

NOTE: Unless otherwise stated herein, all items in this section shall be deemed to fall into Work Group No. 114 for Haylett formula purposes

High tensile and mild steel reinforcement to structural concrete work

24	Various diameter reinforcing bars	t	10.843
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High tensile steel dowel bars

25	16mm Diameter dowel bar 500mm long with one end embedded 250mm deep in side of concrete at expansion joint and other end greased and wrapped in polythene sheeting, including hole through formwork	No	69
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Fabric reinforcement

26	Type 193 fabric reinforcement in surface beds, etc	m2	267
27	Type 395 fabric reinforcement in surface beds, etc	m2	190

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 4</u>			
	<u>BILL NO. 3</u>			
	<u>PRECAST CONCRETE</u>			
	NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation			
	NOTE: Unless otherwise stated herein, all items in this Bill shall be deemed to fall into Work Group No.112 for Haylett Formula purposes			
	NOTE: All precast/prestressed concrete shall be in accordance with SANS 2001-CC1			
	<u>PRECAST CONCRETE</u>			
	<u>Precast concrete slab for toilet pedestal</u>			
1	470 x 600 x 150mm Thick reinforced slab including 250mm diameter opening	No	24	
	<u>Prefabricated pre-stressed concrete ribs</u>			
2	990 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	16	
3	1 045 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	5	
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4	1 265 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	24
5	1 320 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	8
6	1 820 x 447.5 x 100mm Thick concrete slab with 20 x 20mm chamfer around top edge, including ref 193 mesh, two 10mm diameter galvanised continuous threaded lifting bars with bolt and nut to end of bars and with 50 x 50 x 5mm thick galvanised plate with 12mm diameter hole drilled in the centre for 10mm handle bar to slide through and secured through the slab using 15mm pipe sleeve, including all necessary formwork	No	5
7	220 x 100mm Pre-stressed concrete rib in lengths not exceeding 5m	m	27
8	220 x 100mm Pre-stressed concrete rib in lengths exceeding 5m and not exceeding 7,5m	m	55

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Precast Concrete

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<u>SECTION NO. 4</u>				
<u>BILL NO. 4</u>				
<u>MASONRY</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.118 for Haylett Formula purposes				
NOTE: All masonry shall be in accordance with SANS 2001-CM1				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Sizes in descriptions</u>				
Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick				
<u>Hollow walls</u>				
Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole				
<u>Bagged and sealed walls</u>				
Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats bitumen emulsion waterproofing coating				
<u>Face bricks</u>				
Bricks shall be ordered timeously to obtain uniformity in size and colour				
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Pointing

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

BRICKWORK

FOUNDATIONS (PROVISIONAL)

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

1	Piers	m3	2
2	One brick walls	m2	135
3	330mm Hollow walls of two half brick skins including wire ties	m2	202

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	<u>SUPERSTRUCTURE</u>		
	<u>Brickwork of NFP bricks in class II mortar</u>		
4	Piers	m3	3
5	Half brick walls	m2	123
6	Half brick walls in beamfilling	m2	16
7	One brick walls	m2	431
	<u>BRICKWORK SUNDRIES</u>		
	<u>Bagging of 1:3 cement and sand mixture</u>		
8	On brick walls, piers, etc	m2	448
	<u>Movement joints with "Jointex" between horizontal concrete and brick surfaces</u>		
9	10mm Joints not exceeding 300mm wide	m	208
	<u>Brickwork reinforcement</u>		
10	75mm Wide reinforcement built in horizontally	m	850
11	150mm Wide reinforcement built in horizontally	m	2 955
	<u>Pre-stressed fabricated lintels</u>		
12	110 x 75mm Lintels in lengths not exceeding 3m	m	36
13	150 x 75mm Lintels in lengths not exceeding 3m	m	3
	<u>Galvanised hoop iron cramps, ties, etc</u>		
14	30 x 1,6mm Roof tie 1,5m long with one end built into brickwork and other end fixed to timber	No	66
	<u>Air bricks etc</u>		
15	229 x 152mm Clay vermin proof air brick	No	32

FACE BRICKWORK

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	<u>Face brickwork to be "Corobrik®" (Lawley-Gauteng) Firelight Satin FBX of 20-30MPa nominal compressive strength in Class II mortar with recessed horizontal and recessed vertical joints</u>				
16	Extra over NFX brickwork for face brickwork in foundations (Provisional)	m2	92		
17	Extra over NFP brickwork for face brickwork	m2	424		
18	Extra over NFP brickwork for brick-on-edge header course lintels 1 course high, pointed on face and 115mm soffit	m	48		
	<u>Brick-on-edge header course copings, sills, etc of "Corobrik® Firelight Satin FBX" face bricks, pointed with recessed joints on all exposed faces</u>				
19	170mm Wide sills set level and slightly projecting	m	23		
	<u>FIBRE CEMENT WINDOW CILLS</u>				
	<u>Natural grey sills in single lengths bedded in class II mortar including metal fixing lugs etc</u>				
20	12 x 150mm Wide sills set flat and slightly projecting	m	23		
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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>BILL NO. 5</u>				
<u>WATERPROOFING</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No. 120 for Haylett formula purposes				
<u>DAMP PROOFING OF WALLS AND FLOORS</u>				
<u>One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B)</u>				
1	In walls	m2	34	
2	Under slabs on brickwork	m	126	
<u>Two coats of "Brixéal" or other approved bitumen waterproofing coating</u>				
3	On bagged brick walls	m2	188	
<u>One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape</u>				
4	Under surface beds	m2	96	
<u>JOINT SEALANTS</u>				
<u>Pre-compressed bitumen impregnated foam plastic joint sealing strips</u>				
5	10 x 10mm In joints between frames and walls	m	310	
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Waterproofing

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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>BILL NO. 6</u>				
<u>ROOF COVERINGS</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.124 for Haylett Formula purposes				
NOTE: All roof covering to be installed to manufacturers detail and applicable SANS codes. All roof sheeting shall be laid under a 5 year written guarantee for site workmanship and watertightness				
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Section No. 4 Bill No. 6 Roof Coverings ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

PROFILED METAL SHEETING AND ACCESSORIES

0,53mm "Chromadek" or other approved, Colomate finish galvanised metal IBR profile roof sheeting at 17.5 degrees fixed to intermediate timber purlins at 1 250mm centres and to ridge and eaves with minimum 50mm sheeting end overlaps, all in accordance with architects drawings and manufacturer's specifications

1	Roof covering with pitch not exceeding 25 degrees fixed to timber purlins at maximum 1200mm centres with a minimum of 50mm sheeting projection beyond purlins at eaves.	m2	252	
2	Extra over IBR metal roof covering for OPAL Glass fibre reinforced polyster (weight 2,4kg/m ²) roof sheeting fixed with 65 mm galvanised Tek screws and newway seals in alternate sheets between galvanised metal sheet.	m2	94	
	<u>0,53mm "Chromadek" or other approved, Colomate finish galvanised metal ridge cap with and including ridge closer, all in accordance with architects drawings and manufacturer's specifications</u>			
3	Ridge capping	m	43	
4	Counter flashing 70mm girth	m	92	
	<u>"Sondor" or other approved corrugated polycloser</u>			
5	Under ridge capping	m	46	
6	On beamfilling	m	92	

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Roof Coverings

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ROOF AND WALL INSULATION

Sisalation® 420 Heavy industrial grade reinforced aluminium foil insulation double sided, heavy grammage reflective foil laminate incorporating eight layers of aluminium foil, reinforcing scrim, Kraft paper and polyethylene, tested for conformance with SANS 1381-4:2009, with a Class 1 fire rating in accordance with SANS 10177 - 3:2005 and BS 476 part 5, 6 and 7, drawn tautly across rafters and secured to each rafter with 38mm x 3.2mm x 1100mm hardboard counter batten strips positioned flush with the bottom edge of the material thus leaving 150mm overlap exposed at the top for the next layer and 150mm overlap thereafter on each 1 250mm width roll

- 7 Insulation laid taut over rafters and under purlins (at approximately 1 250mm centres) including galvanised steel straining wires

m2

252

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	<u>CARPENTRY AND JOINERY</u>				
	NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
	NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 126 for Haylett Formula purposes				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>Roof Trusses:</u>				
	The following is applicable in respect of plate nailed roof trusses:				
	Trusses are at maximum 1000mm centres. Roof covering is 0,50mm colomate galvanised metal IBR on timber purlins				
	The dimensions in the descriptions of the trusses are nominal and actual measurements are to be obtained from the Architect and/or on site before design or fabrication commences				
	<u>TIMBER ROOF CONSTRUCTION</u>				
	<u>Design Responsibility</u>				
	The contractor shall be responsible for the design of the timber roof construction. The contractor will submit shop drawings for approval by the principal agent within two weeks after the date of tender closing. Appointment of the successful tenderer will be subject to approval of the timber roof construction. The contractor shall commence manufacturing only after written approval of shop drawings from the principal agent .				
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	<u>Plate nailed timber roof construction grade V4 minimum</u>				
1	Design, supply and erect the complete double pitch roof structure to new building (approx. 41m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (2M3F1D)	No	1		
2	Design, supply and erect the complete double pitch roof structure to new building (approx. 30m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (8B)	No	1		
3	Design, supply and erect the complete double pitch roof structure to new building (approx. 38m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (8B)	No	1		
4	Design, supply and erect the complete double pitch roof structure to new building (approx. 21m ² on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (2G)	No	1		
5	Design, supply and erect the complete double pitch roof structure to new building (approx. 28 m2 on flat) including purlins, braces, battens, gangboarding, wall plates, roof ties, gusset plates, bolts, etc (4GR1T)	No	1		
	<u>EAVES, VERGES, ETC</u>				
	<u>"Everite Nutec" medium density plain fibre cement boards</u>				
6	225 x 12mm Thick fascia (code: 041-202) with aluminium H-profile fascia joiners (code: 685-195) including drilling for and fixing with hot dip galvanised drive screws and washers	m	92		
7	200 x 80mm Moulded socketless barge board (code: 721-731) with uPVC H-profile barge joiners	m	68		
	<u>DOORS, ETC.</u>				
	<u>Hardwood Doors</u>				
8	44mm Door 813 x 1900mm high (D1)	No	18		
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Carpentry and Joinery

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<u>BILL NO. 8</u>				
<u>IRONMONGERY</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 132 for Haylett Formula purposes				
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Section No. 4 Bill No. 8 Ironmongery ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

SUPPLEMENTARY PREAMBLES

Proprietary items

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

Prices are to be based on the specific products/articles specified. If tenderers wish to offer alternative products/articles for certain items, these items are to be clearly marked and the alternative specification given with supporting brochures etc clarifying the features of the products/articles offered

On request returnable samples are to be provided to the principal agent for consideration

Finishes to ironmongery

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

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

HINGES, BOLTS, ETC

Manufactured by "Union" or similar approved

1	100 x 75mm Medium duty brass butt hinge	No	50
2	100 x 75mm Two ball bearing butt hinge (Code 8352-100 SB)	No	25
3	50 x 25mm LD polished barrel bolt	No	25

CATCHES, CABIN HOOKS, ETC.

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Ironmongery

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PHOTOLUMINESCENT SIGNS

SUPPLEMENTARY PREAMBLES

Signs are to comply with SANS 1186-1 to 5 and to be to the approval of the local authority. Signs are to have anodised aluminium frames

Prices are to include for fixing by approved methods. The use of double sided tape will not be permitted. Surface mounted signs are to be concealed fixed

Samples, specifications, literature, etc of materials and fabricated articles the tenderer proposes to use shall be submitted with the tender

A ten year guarantee on materials and workmanship shall be submitted by the successful tenderer

Wall mounted photoluminescent statutory signs

10	180 x 180mm Female Sign	No	4
11	180 x 180mm Disabled Sign	No	1
12	180 x 180mm Male Sign	No	2

BATHROOM ACCESSORIES

Manufactured by "Franke" or similar approved

13	"Halcast No. 366" Chromium plated toilet roll holder, plugged and screwed to wall with stainless steel screws	No	24
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Manufactured by "She Bin" or similar approved

14	Feminine hygiene pedal bins	No	15
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Manufactured by "Jassen Dakile" or similar approved

15	"L12603.3801-02" Hinged arm supports	No	2
16	"L12806.0000-00" Wall mounting sets	No	2

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Ironmongery

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	<u>METALWORK</u>				
	NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
	NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.136 for Haylett formula purposes				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>Descriptions</u>				
	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				
	Galvanising must comply to: SANS 121-ISO 1461 & SANS 32-EN 10240 and SANS 14713-ISO 14713 for Hot Dip galvanising on iron and steel articles				
	<u>Door frames</u>				
	Pressed steel door frames shall be supplied with one pair of 100mm galvanised steel loose pin hinges				
	<u>Galvanised steel windows</u>				
	Windows shall be provided with polished brass fittings				
	Only window openings shall be fitted with horizontal 8mm square burglar bars at maximum 150mm centres				
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	Metalwork				
	ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS				
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R

Courses adjacent to window jambs are to have cores filled allowing fixing lugs to be built-in

GALVANISED MILD STEEL GATES, SCREENS, ETC.

Welded gate and frame

- | | |
|---|---|
| 1 | Single gate 900 x 2100mm high of 25mm steel tubing and fitted with a pair of suitable hinges welded to post and with ears for padlock |
| 2 | Double gate 1800 x 2100mm high of 25mm steel tubing and fitted with a pair of suitable hinges welded to post and with ears for padlock (G2) |

No 6

No 1

GALVANISED PRESSED STEEL DOOR FRAMES

1,2mm Rebated frames suitable for one brick walls

- | | |
|---|----------------------------------|
| 3 | Frame for door 813 x 2032mm high |
|---|----------------------------------|

No 25

GALVANISED STEEL WINDOWS, DOORS, ETC

Purpose made steel windows with 8mm burglar bars to opening sashes

- | | |
|---|--|
| 4 | Window (W01) overall size 889 x 457mm high |
|---|--|

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Metalwork

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Metalwork

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Bill No. 9

Metalwork

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Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>BILL NO. 10</u>				
<u>PLASTERING</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 142 for Haylett formula purposes				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Testing of sand/cement screeds:</u>				
Testing to be done by an accredited independent testing specialist, or by the provision of independently certified test date to demonstrate compliance with the Specification as set out below				
Testing to include both light tap and heavy weight impact using a 4kg mass in compliance with the BRE screed tester requirements				
Maximum indentation not to exceed 3mm				
Alternative substrate testing methods may be put forward for consideration and acceptance by the Principal Agent				
All test results to be provided in Microsoft Excel format with unique numbers and the positions of tests referenced and indicated on a floor plan (floor plan to be provided by Principal Agent.)				
In all instances of results failing to comply as determined by the Principal Agent, additional tests to prove final compliance will be for the account of the contractor				
<u>EPOXY FLOOR COATINGS</u>				
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Section No. 4 Bill No. 10 Plastering ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT				

	<u>2 Part "Sikafloor 161" epoxy primer with "Sikafloor 264" seal coat (colour: Grey) as per manufacturer's specifications</u>		
1	On screeded floors	m2	120
2	Skirtings 60mm high	m	142
	<u>SCREEDS</u>		
	<u>Screeds on concrete</u>		
3	30mm Thick on narrow widths	m2	3
4	30mm Thick on floors and landings	m2	120
	<u>INTERNAL PLASTER</u>		
	<u>Cement plaster on brickwork</u>		
5	On walls	m2	652
6	On narrow widths	m2	33
	<u>SPECIALISED PLASTER TYPE WALL COATINGS</u>		
	<u>15mm Thick impermeable plaster mixed with silicite sealing agent applied in strict accordance with manufacturer's specifications, on brickwork</u>		
7	On walls	m2	247

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Bill No. 10
Plastering
**ERADICATION OF PIT LATRINES PROGRAMME FOR
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Plastering

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Bill No. 10

Plastering

**ERADICATION OF PIT LATRINES PROGRAMME FOR
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Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO.4</u>				
	<u>BILL NO. 11</u>				
	<u>TILING</u>				
	NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
	NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 144 for Haylett formula purposes				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>Fixing</u>				
	Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding				
	Tiling described as "fixed with adhesive on power floated concrete" shall be deemed to include for approved tiling key-coat				
	Ceramic, porcelain, marble and granite tiles are to be fixed and grouted with suitable adhesives and grouts from the "Tal Professional" ("Ceresit Tylon"?) range of products as recommended by the manufacturer of the tiles				
	<u>WALL TILING</u>				
	<u>200 x 200 x 5mm White glazed ceramic tiles fixed with an approved adhesive to plaster (plaster elsewhere)</u>				
1	On walls in isolated panels, splashbacks, etc	m2	9		
	Carried Forward to Summary of Section No. 4				
	Section No. 4				
	Bill No. 11				
	Tiling				
	ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS				
	60491906 - PRINCIPAL BUILDING AGREEMENT				

Item No	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>BILL NO. 12</u>				
<u>PLUMBING AND DRAINAGE</u>				
<u>(PROVISIONAL)</u>				
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.148 for Haylett formula purposes				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Wire gratings</u>				
Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings				
<u>Stormwater channels</u>				
Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc, and disposal of surplus material on site				
<u>Septic tanks</u>				
Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site				
<u>Sealing of edges</u>				
Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone				
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Plumbing and Drainage (Provisional)				
ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS				
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uPVC pipes and fittings

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

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

uPVC pressure pipes and fittings

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

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

Copper pipes

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

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

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing" and only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained

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ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

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Fixing of pipes

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

Paper wrapping to pipes

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

Disinfection of water pipework

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

Laying, backfilling, bedding, etc of pipes

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

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

SANS 1200L : Medium-pressure pipelines

SANS 1200LD : Sewers

SANS 1200LE : Stormwater drainage

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

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

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

General

Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 93% Mod AASHTO density and disposal of surplus material on site

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

Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured)

As-built drawings

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

RAINWATER GOODS

uPVC gutters and rainwater pipes

1	110mm Half-round roof gutters	m	93
2	Extra over gutter for stopped end	No	20
3	Extra over gutter for outlet for 110mm pipe	No	12
4	75mm Diameter rainwater pipes	m	37
5	Extra over rainwater pipe for bend	No	18
6	Extra over rainwater pipe for shoe	No	12
7	Extra over rainwater pipe for swan-neck	No	12

SANITARY FITTINGS

"Atlas Plastics" or similar approved

8	"Bowl" urinal (code: 507AP) fixed to wall with and including matching brackets complete	No	8
9	"Christy" wash hand basin with splashback (code: 383AP) polyethylene wash hand basin size 570 X 395mm (colour: granite) fixed to wall with and including cast iron brackets	No	17
10	"VIP 200" low level floor mounted WC pedestal (code: 222AP) complete with flap and incorporated seat	No	24

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WASTE UNIONS ETC

"Atlas Plastics" or similar approved

11	Waterless urinal fitting and waste (code: 496AP)	No	8
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"Cobra Watertech" or similar approved

12	32mm Basin waste union (code: 303) including plug and chain	No	17
----	---	----	----

TRAPS, ETC.

"Marley" or similar approved

13	50mm PVC trap (code: ETPA10)	No	17
----	------------------------------	----	----

TAPS, VALVES, ETC

"Cobra Watertech" or similar approved

14	15mm 111-15 Pillar taps fitted with restriction washer, one tap hole stopper	No	12
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15	15mm 111-041 Medical elbow action pillar tap with flanged backnut fitted with restriction washer and one tap hole stopper	No	2
----	---	----	---

16	15mm 1003/125 Brass fullway wheelhead gate valve	No	17
----	--	----	----

"Plumpride" or similar approved

17	15mm Plastic bib tap	No	6
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VENT PIPES, ETC

"SWAN plastics" or similar approved black PVC UV stabilized vent pipes

18	110mm Vent pipe with and including holderbats screwed to walls	m	120
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Extra over black PVC UV stabilized vent pipe for fittings

19	110mm Sockets to be cut off and used to fix shade cloth over vent pipe (elsewhere measured).	No	32
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20	110mm PVC single socket cast into slab for 110mm vent pipe (elsewhere measured)	No	32
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21	110mm pipe x 130mm Long welded to socket to form hole through slab.	No	32
22	55% Black shade cloth to top of vent pipe (elsewhere measured)	No	32
	<u>Sundries</u>		
23	Provide all necessary apparatus, water, etc, for and test the whole of the Sanitary Plumbing to the satisfaction of the Architect and Local Authority and replace any defective work free of charge and leave perfect (PIT)	No	5
	<u>SANITARY PLUMBING</u>		
	NOTE: Unless otherwise stated herein, all items in this section shall be deemed to fall into Work Group No. 146 for Haylett formula purposes		
	<u>Class 34 uPVC pipes</u>		
24	50mm Pipes	m	129
	<u>Extra over uPVC pipes for</u>		
25	50mm Access bend	No	24
26	50mm Access junction	No	20
27	50mm Bend	No	70
28	50mm Junction	No	24
	<u>WATER SUPPLIES</u>		
	<u>Class II copper pipes</u>		
29	15mm Pipes	m	27
30	22mm Pipes	m	65
	<u>Extra over class II copper pipes for solvent welded fittings</u>		
31	15mm fittings	No	44
32	22mm fittings	No	25
	<u>TANKS, ETC</u>		
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	Section No. 4 Bill No. 12 Plumbing and Drainage (Provisional) ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT		

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Plumbing and Drainage (Provisional)

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Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO. 4</u>				
	<u>BILL NO. 13</u>				
	<u>GLAZING</u>				
	NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
	NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.150 for Haylett formula purposes				
	<u>GLAZING TO STEEL WITH PUTTY</u>				
	<u>6.38mm Arctic Snow Laminated Safety Glass</u>				
1	Panes exceeding 0,1m ² and not exceeding 0,5m ²	m2	16		
	<u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u>				
	<u>6mm Silvered float glass copper backed mirror with polished edges, holed for and fixed with chromium plated dome capped screws with rubber buffers to plugs in brickwork or concrete</u>				
2	Mirror 300 x 600mm high with dome capped screws	No	17		
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	Bill No. 13				
	Glazing				
	ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS				
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Item No		Unit	Quantity	Rate	Amount
	<u>SECTION NO. 4</u>				
	<u>BILL NO. 14</u>				
	<u>PAINTWORK</u>				
	NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation				
	NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No 152 for Haylett formula purposes				
	<u>SUPPLEMENTARY PREAMBLES</u>				
	<u>PROPRIETY ITEMS OR MATERIALS</u>				
	Proprietary items or materials where specified are to be of the brand specified - or other approved - by the Head: Public Works				
	<u>COLOURS</u>				
	Unless otherwise described all paintwork shall be deemed to have a colour value in excess of 7 on the Munsell system in accordance with SANS 1091				
	<u>PAINTWORK ETC TO NEW WORK</u>				
	<u>ON INTERNAL FLOATED PLASTER SURFACES</u>				
	<u>One coat alkali resistant primer and two coats PVA emulsion paint for interior use</u>				
1	Walls	m2	671		
	<u>ON FIBRE-CEMENT BOARD SURFACES</u>				
	<u>One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use</u>				
2	Cills	m	26		
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Bill No. 14

Paintwork

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Paintwork

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Item No	Quantity	Rate	Amount
SECTION NO. 4			
BILL NO. 15			
EXTERNAL WORKS (PROVISIONAL)			
NOTE: The Bills of Quantities document forms part of and must be read and priced in conjunction with all the other documents forming part of the contract document, the Standard Conditions of Tender, Conditions of Contract, Model Preambles for Trade 2008, Specifications, Drawings and all other relevant documentation NOTE: Unless otherwise stated herein, all items in this bill shall be deemed to fall into Work Group No.146 for Haylett formula purposes			
SUPPLEMENTARY PREAMBLES			
<u>Stormwater channels</u>			
Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 95% Mod AASHTO density and disposal of surplus material on site			
<u>General</u>			
Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 93% Mod AASHTO density and disposal of surplus material on site			
<u>WALKWAYS</u>			
<u>The following in walkways:</u>			
<u>Excavation in earth not exceeding 2m deep</u>			
1	Reduced levels under floors	m3	63
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Section No. 4 Bill No. 15 External Work (Provisional) ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT			

	<u>Extra over channel excavations in earth for excavation in</u>				
2	Soft rock	m3	6		
3	Hard rock	m3	3		
	<u>Risk of collapse of excavations</u>				
4	Sides of excavations not exceeding 1.5m deep	m2	70		
	<u>Extra over all excavations for carting away</u>				
5	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the Contractor	m3	61		
	<u>Keeping excavations free of water</u>				
6	Keep excavations free of water (other than subterranean water)			Item	
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site stabilised with 8% cement per volume, compacted to 98% Mod AASHTO density</u>				
7	Backfilling to trenches, etc	m3	4		
	<u>G7 Earth filling supplied by the contractor, compacted to 93% Mod AASHTO density</u>				
8	Under floors, steps, pavings, etc	m3	38		
	<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 90% Mod AASHTO density	m2	252		
	<u>Weedkiller (active ingredients metalaclor 102,8 g/l, terbitilasien 248,6 g/l and atrasiem 248,6 g/l) mixed in the proportion of 100 ml weedkiller to 100 l water and applied at a rate of 10 l/m²</u>				
10	Under paving etc	m2	252		
	<u>25MPa/19mm concrete</u>				
11	Pavings cast in panels	m3	34		
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	<u>Test blocks</u>		
12	Allow for all necessary concrete test cubes size 150 x 150 x 150mm cast from batches of concrete set of three, made, stored, cured and tested in accordance with SANS 2001-CC1, including use of approved cube moulds, transporting to an approved testing laboratory for testing, paying all charges and submitting reports to the Structural Engineer. (Provisional)	Sets	8
	<u>Finishing top surfaces of concrete smooth with a wood float</u>		
13	Surface beds, slabs, apron, etc to falls	m2	252
	<u>Rough formwork to sides</u>		
14	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	280
	<u>Expansion joints with 12mm softboard (bitumen impregnated softboard) between vertical concrete surfaces, including necessary formwork</u>		
15	Not exceeding 300mm high through slabs	m	163
	<u>Saw cut joints</u>		
16	12 x 100mm Saw cut joints in top of concrete	m	163
	<u>Fabric reinforcement</u>		
17	Type 193 fabric reinforcement in surface beds, etc	m2	210
	<u>"Thioflex" two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc</u>		
18	12 x 10mm In saw cut joints in floors	m	163
	<u>EARTH DRAIN (WITH BERM)</u>		
19	Excavate not exceeding 1m deep for earth drain	m3	5
20	In landscape mounds, berms, etc	m3	5

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Bill No. 15
External Work (Provisional)
ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS
60491906 - PRINCIPAL BUILDING AGREEMENT

FENCING

Galvanised mild steel fence with bitumen-aluminium painted (two coats) steel pipe posts, stays, gates, etc including galvanised steel bolts, straining eye bolts, etc, site clearance and preparation of ground

21	Fencing 1 800mm high of 4 strands of galvanised twisted double strand 1.6mm straining wire tied to posts and eye bolts and covered with 50 x 50 x 2.5mm welded wire mesh tied at 150mm centres to each straining wire including 50mm diameter intermediate posts 1500mm long at not exceeding 3000mm centres	m	40
22	Continuous razor wire security roll to top of fence flat wrapped in 700mm diameter rings, tied together and to straining wire at 150mm centres	m	40
23	50mm Diameter inclined stay 1 800mm long, including caps, base plates, concrete base, etc	No	12
24	100mm Diameter straining or corner post 1800mm long, including caps, base plates, concrete base, etc	No	6
25	Gate 1 350mm x 1 800mm high of 50mm diameter framing covered with 50 x 50 x 2.5mm welded wire mesh tied at 150mm centres and steel security spikes screwed to top of gate, including hinges, heavy duty lockable barrel bolt and 63mm brass five-pin tumbler padlock	No	1

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External Work (Provisional)

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

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Bill No. 15

External Work (Provisional)

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Item No	Quantity	Rate	Amount
<u>SECTION NO. 4</u>			
<u>BILL NO. 16</u>			
<u>PROVISIONAL SUMS</u>			
<u>NOTES:</u>			
1. The Contractor's attention is drawn specifically to the Principal Building Agreement Clause 20.0 (Nominated Sub-Contractors), Clause 21.0 (Selected Sub-Contractors) and Clause 22 (Work by Others) and to the related Clauses in Bill No. 1 - Preliminaries 2. The Contractor's attention is drawn also to the definition of attendance on Nominated or Selected Sub-Contractors and of fuel, power and water for commissioning of mechanical and other specialised installations given in the JBCC Preliminaries 3. Where special attendance includes the provision of hoisting facilities for a Sub-Contractor then the Contractor shall: * Ensure that the capacities of his hoisting equipment are sufficient to deal with the masses and the quantities of the items to be hoisted * Schedule the times of availability of the hoisting equipment for each Sub-Contractor * Provide all necessary personnel to operate the hoisting equipment all to enable the Sub-Contractor to execute the hoisting or lowering of his material, etc. using the facilities provided by the Contractor 4. Under no circumstances may any Prime Cost - Provisional Amount, etc. be extended at an amount lower than the amount given in this Bill			
<u>BUDGETARY ALLOWANCES</u>			
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Section No. 4 Bill No. 16 Provisional Sums ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT			

Temporary Ablutions

- | | |
|---|--|
| 1 | Allow a budgetary amount of R250 000.00 (Two Hundred and Fifty Thousand Rand) for the provision of temporary ablutions |
|---|--|

Item

Earthing

- | | |
|---|---|
| 2 | Allow a budgetary amount of R50 000.00 (Fifty Thousand Rand) for the Earthing |
|---|---|

Item

Carried to Collection

R

Section No. 4

Bill No. 16

Provisional Sums

ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS

60491906 - PRINCIPAL BUILDING AGREEMENT

Section No. 4

Bill No. 16

Provisional Sums

COLLECTION

Total Brought Forward from Page No.

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No**

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Amount

Carried Forward to Summary of Section No. 4

R

Section No. 4

Bill No. 16

Provisional Sums

**ERADICATION OF PIT LATRINES PROGRAMME FOR
SCHOOLS**

60491906 - PRINCIPAL BUILDING AGREEMENT

Bill No	SECTION SUMMARY - Zenzele Primary School	Page No	Amount
1	Earthworks (Provisional)	176	
2	Concrete, Formwork and Reinforcement	182	
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5	Waterproofing	193	
6	Roof Coverings	197	
7	Carpentry and Joinery	201	
8	Ironmongery	206	
9	Metalwork	209	
10	Plastering	212	
11	Tiling	213	
12	Plumbing and Drainage (Provisional)	221	
13	Glazing	222	
14	Paintwork	225	
15	External Work (Provisional)	230	
16	Provisional Sums	233	
Carried to Final Summary			R
Section No. 4 ERADICATION OF PIT LATRINES PROGRAMME FOR SCHOOLS 60491906 - PRINCIPAL BUILDING AGREEMENT			

[illegible]