

Item No	Quantity	Rate	Amount
<u>BILL NO. 1</u>			
<u>PRELIMINARIES</u>			
<u>BUILDING AGREEMENT AND PRELIMINARIES</u>			
<p>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</p> <p>The JBCC Principal Building Agreement contract data form an integral part of this agreement</p> <p>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</p> <p>The contractor is deemed to have referred to the above mentioned documents for the full intent and meaning of each clause</p> <p>The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only</p> <p>Where any item is not relevant to this agreement such item is marked N/A signifying "not applicable"</p> <p>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</p>			
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PREAMBLES FOR TRADES

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

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)

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SECTION A: PRINCIPAL BUILDING AGREEMENT

Interpretation (A1-A7)

1 Clause 1.0 - Definitions and interpretation

Pricing of bills of quantities

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

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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**
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:.....

2 Clause 2.0 - **Law**, regulations and **notices**

3 Clause 3.0 - Offer and acceptance

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

4 Clause 4.0 - Cession and assignment

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

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5	<p>Clause 5.0 - Documents</p> <p>Value Added Tax</p> <p>Provision is made in the summary page of these bills of quantities for the inclusion of Value Added Tax (VAT)</p> <p>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</p> <p>Electronic issue of drawings</p> <p>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]</p> <p>F:..... V:..... T:.....</p>	Item	
6	<p>Clause 6.0 - Employer's agents</p> <p>Delegated authority</p> <p>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:</p> <p>1. Principal Agent</p> <p><i>Note that the contract instructions hereinafter are selected from those listed in clause 17.1 of the JBCC PBA</i></p> <p>1.1 Duties [6.2] :</p> <p>The architect is responsible for the architectural design, functional design and quality inspection of the works</p> <p>1.2 Contract instructions [6.2; 17.1] :</p>		
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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				
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				
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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]				
2.	<u>Quantity surveyor</u>				
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				
3.	<u>Civil and structural engineer</u>				
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				
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<p>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</p> <p>3.2.3 The site [13.0]</p> <p>3.2.4 Compliance with the law, regulations and bylaws [2.1]</p> <p>3.2.5 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works</p> <p>3.2.6 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]</p> <p>3.2.7 Removal or re-execution of work</p> <p>3.2.8 Removal or substitution of any materials and goods</p> <p>3.2.9 Protection of the works</p> <p>3.2.10 Making good physical loss and repairing damage to the works [23.2.2]</p> <p>3.2.11 Rectification of defects [21.2]</p> <p>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</p> <p>3.2.13 Expenditure of budgetary allowances, prime cost amounts and provisional sums</p> <p>4. <u>Mechanical engineer</u></p> <p><i>Note that the contract instructions hereinafter are selected from those listed in clause 17.1 of the JBCC PBA</i></p>			
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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**

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]

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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**

5. Electrical engineer

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] :

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**

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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				
6.	<u>Wet services engineer</u>				
	<i>Note that the contract instructions hereinafter are selected from those listed in clause 17.1 of the JBCC PBA</i>				
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				
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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		
7.	<u>Fire consultant</u>		
<i>Note that the contract instructions hereinafter are selected from those listed in clause 17.1 of the JBCC PBA</i>			
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<p>7.1 Duties [6.2] :</p> <p>The fire consultant is responsible for all aspects of rational fire design and quality inspection of the works</p> <p>7.2 Contract instructions [6.2; 17.1] :</p> <p>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</p> <p>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</p> <p>7.2.3 Compliance with the law, regulations and bylaws [2.1]</p> <p>7.2.4 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works</p> <p>7.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]</p> <p>7.2.6 Removal or re-execution of work</p> <p>7.2.7 Removal or substitution of any materials and goods</p> <p>7.2.8 Protection of the works</p> <p>7.2.9 Making good physical loss and repairing damage to the works [23.2.2]</p> <p>7.2.10 Rectification of defects [21.2]</p> <p>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</p>			
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7.2.12 Expenditure of **budgetary allowances, prime cost amounts** and **provisional sums**

8. Health and safety consultant

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

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7 Clause 7.0 - Design responsibility

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T:.....

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Insurances and securities (A8-A11)

8 Clause 8.0 - **Works** risk

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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**

User note

If it is deemed advisable, the extent of any guarantee for payment may be stated and whether it is required of the contractor to waive his lien. Edit the following clause:

Guarantee for payment

The **employer** shall provide to the **contractor** a **guarantee for payment** in the amount ofRand
(R.....) [11.5.1]. The **contractor** shall consequently waive his lien or right of continuing possession of the **works** [11.10]

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]

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	<u>Execution (A12 - A17)</u>			
12	<p>Clause 12.0 - Obligations of the parties</p> <p>Office accommodation</p> <p>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]</p> <p>Notice board</p> <p>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]</p> <p>Statutory and other notices</p> <p>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</p> <p>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</p> <p>F:..... V:..... T:.....</p>	Item		
13	<p>Clause 13.0 - Setting out</p> <p>F:..... V:..... T:.....</p>	Item		
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14	<p>Clause 14.0 - Nominated subcontractors</p> <p>F:..... V:..... T:.....</p>	Item		
15	<p>Clause 15.0 - Selected subcontractors</p> <p>F:..... V:..... T:.....</p>	Item		
16	<p>Clause 16.0 - Direct contractors</p> <p>Attendance on direct contractors</p> <p>In respect of direct contractors the contractor shall:</p> <ol style="list-style-type: none"> 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] <p>F:..... V:..... T:.....</p>	Item		
17	<p>Clause 17.0 - Contract instructions</p> <p>Site instructions</p> <p>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</p>			
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	Completion (A18 - A24)		
18	Clause 18.0 - Interim completion	N/A	
19	Clause 19.0 - Practical completion F:..... V:..... T:.....	Item	
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	
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24	<p>Clause 24.0 - Penalty for late or non-completion</p> <p>F:..... V:..... T:.....</p> <p><u>Payment (A25 - A27)</u></p>	Item		
25	<p>Clause 25.0 - Payment</p> <p>Prices submitted</p> <p>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</p> <p>F:..... V:..... T:.....</p>	Item		
26	<p>Clause 26.0 - Adjustment of the contract value and final account</p> <p>Fluctuations in costs</p> <p>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]</p> <p>Tenant installation/user requirements delayed</p> <p>There is a possibility that certain works related to tenant installation/user requirements may have to be delayed and may consequently not be executed prior to practical completion</p>			
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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]

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27 Clause 27.0 - Recovery of expense and/or loss

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Suspension and termination (A28 - A29)

28 Clause 28.0 - Suspension by the **contractor**

F:..... V:.....
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29	Clause 29.0 - Termination F:..... V:..... T:..... <u>Dispute resolution (A30)</u>	Item		
30	Clause 30.0 - Dispute resolution F:..... V:..... T:.....	Item		
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31	<p><u>Agreement</u></p> <p>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</p> <p>F:..... V:..... T:.....</p>	Item		
32	<p><u>Contract data</u></p> <p>Tenderer's selections</p> <p>Before submission of his tender the contractor is to complete the tenderer's selections in the contract data</p> <p>F:..... V:..... T:.....</p> <p><u>SECTION B: GENERAL PRELIMINARIES</u></p> <p><u>Definitions and interpretation (B1)</u></p>	Item		
33	<p>Clause 1.1 - Definitions</p> <p>F:..... V:..... T:.....</p>	Item		
34	<p>Clause 1.2 - Interpretation</p> <p>F:..... V:..... T:.....</p> <p><u>Documents (B2)</u></p>	Item		
35	<p>Clause 2.1 - Checking of documents</p> <p>F:..... V:..... T:.....</p>	Item		
36	<p>Clause 2.2 - Provisional bills of quantities</p>			
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<p>Multiple procurement</p> <p>These bills of quantities are in multiple procurement format ie the "wet trades" - earthworks, concrete, formwork and reinforcement, precast concrete, masonry, waterproofing and sub-surface drainage - are fully measured and the subsequent trades are budgetary allowances and/or provisional sums</p> <p>F:..... V:..... T:.....</p> <p>Clause 2.3 - Availability of construction information</p> <p>F:..... V:..... T:.....</p> <p>Clause 2.4 - Ordering of materials and goods</p> <p>F:..... V:..... T:.....</p> <p><u>Previous work and adjoining properties (B3)</u></p> <p>Clause 3.1 - Previous work - dimensional accuracy</p> <p>F:..... V:..... T:.....</p> <p>Clause 3.2 - Previous work - defects</p> <p>F:..... V:..... T:.....</p> <p>Clause 3.3 - Inspection of adjoining properties</p> <p>F:..... V:..... T:.....</p> <p><u>The site (B4)</u></p> <p>Clause 4.1 - Handover of site in stages</p> <p>F:..... V:..... T:.....</p>	<p>Item</p> <p>Item</p> <p>Item</p> <p>Item</p> <p>Item</p> <p>Item</p> <p>Item</p>	<p></p> <p></p> <p></p> <p></p> <p></p> <p></p> <p></p>	<p></p> <p></p> <p></p> <p></p> <p></p> <p></p> <p></p>
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43	Clause 4.2 - Enclosure of the works 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		
46	Clause 4.5 - Existing premises occupied F:..... V:..... T:.....	Item		
47	Clause 4.6 - Services - known F:..... V:..... T:.....	Item		
	<u>Management of contract (B5)</u>			
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:.....	Item		
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Samples, shop drawings and manufacturer's instructions (B6)

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

Deposits and fees (B7)

55 Clause 7.1 - Deposits and fees

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

Item

Temporary services (B8)

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:.....

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59	<p>Clause 8.4 - Communication facilities</p> <p>F:..... V:..... T:.....</p> <p><u>Prime cost amounts (B9)</u></p>	Item		
60	<p>Clause 9.1 - Responsibility for prime cost amounts</p> <p><u>Attendance on subcontractors (B10)</u></p>			
61	<p>Clause 10.1 - General attendance</p> <p><u>User note</u></p> <p><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></p> <p>F:..... V:..... T:.....</p>	Item		
62	<p>Clause 10.2 - Special attendance</p> <p><u>General (B11)</u></p>			
63	<p>Clause 11.1 - Protection of the works</p> <p>F:..... V:..... T:.....</p>	Item		
64	<p>Clause 11.2 - Protection/isolation of existing works and works occupied in sections</p> <p>F:..... V:..... T:.....</p>	Item		
65	<p>Clause 11.3 - Security of the works</p> <p>F:..... V:..... T:.....</p>	Item		
66	<p>Clause 11.4 - Notice before covering work</p> <p>F:..... V:..... T:.....</p>	Item		
Carried to Collection			R	
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67	<p>Clause 11.5 - Disturbance</p> <p>Disturbance</p> <p>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</p> <p>F:..... V:.....T:.....</p>	Item	
68	<p>Clause 11.6 - Environmental disturbance</p> <p>Controlling all forms of pollution</p> <p>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</p> <p>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</p> <p>Environmental management plan</p> <p>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</p> <p>F:..... V:.....T:.....</p>	Item	
69	<p>Clause 11.7 - Works cleaning and clearing</p> <p>F:..... V:..... T:.....</p>	Item	
<p style="text-align: right;">Carried to Collection</p>			R
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70	<p>Clause 11.8 - Vermin</p> <p>F:..... V:..... T:.....</p>	Item		
71	<p>Clause 11.9 - Overhand work</p> <p>F:..... V:..... T:.....</p>	Item		
72	<p>Clause 11.10 - Tenant installations</p> <p>F:..... V:..... T:.....</p>	Item		
73	<p>Clause 11.11 - Advertising</p> <p>F:..... V:..... T:.....</p>	Item		
<u>SECTION C: SPECIFIC PRELIMINARIES</u>				
74	<p>Warranties for materials and workmanship</p> <p>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</p> <p>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</p> <p>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</p> <p>F:..... V:..... T:.....</p>	Item		
<p style="text-align: right;">Carried to Collection</p> <p>Bill No. 1 Preliminaries Durapi Consulting</p>			R	

75	<p>Overtime</p> <p>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</p> <p>F:..... V:..... T:.....</p>	Item		
76	<p>Cooperation of the contractor for cost management</p> <p>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</p> <p>F:..... V:..... T:.....</p>	Item		
77	<p>Overloading</p> <p>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</p> <p>F:..... V:..... T:.....</p>	Item		
Carried to Collection			R	
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78	<p>Propping of floors below</p> <p>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</p> <p>F:..... V:..... T:.....</p>	Item		
79	<p>Testing of flat roof waterproofing for watertightness</p> <p>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</p> <p>F:..... V:..... T:.....</p> <p>User note</p> <p><i>Insert the following where a health and safety specification is <u>not</u> 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</i></p>	Item		
80	<p>Health and safety</p>			
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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

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]

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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:.....

Item

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:.....

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83	<p>Advertising rights</p> <p>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</p> <p>F:..... V:..... T:.....</p>	Item		
84	<p>Confidentiality</p> <p>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</p> <p>No information regarding this project shall be published or disclosed without the prior written consent of the employer</p> <p>F:..... V:..... T:.....</p>	Item		
85	<p>Media releases</p> <p>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</p> <p>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</p> <p>F:..... V:..... T:.....</p>	Item		
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SUMMARY OF CATEGORIES

Category : Fixed R.....
Category : Value R.....
Category : Time R.....

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Item No	Quantity	Rate	Amount
<p><u>BILL NO. 2</u></p> <p><u>ALTERATIONS (PROVISIONAL)</u></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary items or materials</u></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p><u>View site:</u></p> <p>Before submitting his tender the contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained</p> <p><u>Damage to existing finishes:</u></p> <p>The Contractor will be held responsible for all damage, however caused, to existing finishes and fittings etc. and he must make good all damage at his own expense to the approval of the Principal Agent</p>			
<p>Carried to Collection</p>		R	
<p>Bill No. 2 Alterations Durapi Consulting</p>			

Breaking down, demolition and alteration activities and tasks, hacking off of existing plaster, etc. is to be executed with care so as to prevent damage to remaining floor and wall surfaces and finishes (where these are to be retained). Tenders will be deemed to include allowance for any necessary protection of existing surfaces and structures as may be necessary to effect the above, as the cost of repairing damage to existing surfaces and structures will be solely for the Contractors account

Responsibility for site:

The contractor is to note that upon possession of the site by himself, and extending until practical completion is achieved, he is solely responsible for the site, site security, general upkeep and cleaning of the site and all other responsibilities in maintaining a construction site in conformance with but not limited to, the Construction Regulations 2003, all local by-laws, all user client regulations, and all Client regulations and procedures. Tenderers are therefore urged to study all available material and to investigate fully the site and areas contiguous to the site, in order to determine the range and extent of responsibility. No additional monetary and/or time claims will be entertained in respect of the above

Explosives :

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

General:

The contract shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining classroom blocks and their students. He shall provide proper protection and provide, erect and remove when directed, any temporary tapaulins that may be necessary during the progress of the works, or to the satisfaction of the principal agent

Carried to Collection

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 Alterations
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R

Water supply pipes and other piping that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the principal agent

Prices for taking out of doors, windows, etc. shall include for removal of all beads, architraves, ironmongery, etc

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

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

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

The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc.)

Removal of materials:

Where removal is included in the heading, sub-heading or item description, prices shall be deemed to include for the necessary costs in removal and appropriate disposal of materials including but not limited to labour, transportation and disposal costs. No further claims in this regard will be entertained

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Removal of asbestos material:

All preparatory work, alterations, etc., to existing asbestos cement roof sheeting, gutters, rainwater pipes, etc., is to be carried out strictly by an approved and certified specialist company and in accordance with statutory requirements (Occupational Health and Safety Act, 1993 - Asbestos Regulations 2001) and all necessary precautions must be taken when working with and disposing of asbestos cement products and the disposing of waste water resulting from cleaning operations, etc

The following shall apply in respect of asbestos removal:

The removal of asbestos shall be carried out by a certified entity, registered in accordance with the Occupational Health and Safety Act 1993 and the Asbestos Regulation 2001. Asbestos in all forms/building elements that is to be removed, shall be carried out in strict accordance with aforementioned regulation, and a certificate issued by the entity as contemplated in the above, shall be provided per block for the removal thereof, where the term block shall in this context refer to any single, free standing building structure, regardless of size or purpose. Corresponding disposal certificates shall be issued by the facility at which the asbestos is disposed off, with said facility to, prior to the disposal of any asbestos material provide satisfactory proof that the facility is duly registered and fully compliant in terms of the act, to receive the asbestos material. Under no circumstances is the contractor nor any of his duly authorised representatives to sell and/or give away asbestos material to any member/s of the school community, the community in general or the public at large. Should this be found to be occurring, the contractor will be held responsible contractually and may further be prosecuted criminally. The cost for complying with the above, and all requirements of regulation as reflected above is to be priced for in the items for removal of asbestos material. No further claims in this regard will therefore be entertained

Carried to Collection

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REMOVAL OF EXISTING WORK

Breaking down and removing face brickwork etc

1	Half brick wall	m2	26
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Breaking down and removing brickwork etc

2	150 x 150 x 150mm Patterned grill block	m2	26
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Taking out and removing doors, windows, etc from brickwork

3	Timber single door and steel frame 900 x 2100mm high	No	6
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4	Glazed steel window not exceeding 2,5m2	No	5
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Taking down and removing roofs, floors, panelling, ceilings, partitions, etc

5	Pitched interlocking concrete roof tiles	m2	56
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6	Fibre cement roof sheeting	m2	16
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7	Gypsum plasterboard ceilings including cornices, timber bandering, etc	m2	129
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8	Fibre cement fascias and barge boards including all fixings, etc	m	28
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9	125 x 75mm Fibre cement eaves gutters and rainwater pipes including all fixings, etc	m	44
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10	125 x 75mm uPVC Eaves gutters and rainwater pipes	m	20
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Taking out and removing joinery fittings etc

11	Timber panel seating 600mm wide and back rest 600mm high including all timber panelling ends, etc fixed to brickwork	m	104
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	<u>Taking out and removing roof coverings, setting aside for re-use and including refixing in new position</u>				
12	420 x 332mm Concrete roof tiles	m2	10		
	<u>Taking out and removing piping, sanitary fittings, etc with and including all taps, stop cocks, valves etc including disconnecting piping from fittings, making good floor and wall finishes and removing all rubble and carting to a dump site closest to the site (making good tiling and paintwork elsewhere)</u>				
13	Vitreous china WC pan with cistern	No	3		
14	Cast iron urinal size 1500 x 1500mm high	No	1		
15	Vitreous china wash hand basin	No	2		
	<u>Taking out/off and removing sundry metalwork</u>				
16	Steel gate 900 x 2100mm high from brick wall	No	2		
	<u>Hacking up/off and removing granolithic, screeds, plaster, etc from concrete or brickwork and preparing surfaces for new screeds, plaster, etc</u>				
17	30mm Screed from floors	m2	112		
	<u>Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc</u>				
18	200 x 200mm Tiles to floors	m2	25		
19	200 x 200mm Tiles to walls	m2	7		
Carried to Collection					
Bill No. 2 Alterations Durapi Consulting					R

TEMPORARY ROOF PROTECTION

The Contractor will be held responsible for all damage, howsoever caused, to finishes inside rooms where the existing roof coverings have been removed and he must make good all damage at his own expense to the approval of the Employer

20	Cover and maintain existing roofs in a perfectly watertight condition during alterations by means of heavy tarpaulins properly secured and maintained in position to the approval of the Employer and make good all work damaged or disturbed after completion (measured on flat)	m2	82
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MAKING GOOD OF FINISHES, ETC

Stitching to brick walls

21	Raking out horizontal lines of the mortar joint and installing stainless steel helical bars into the brickwork and securing it with epoxy mortar as determined by structural engineer	m	15
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Making good screed

22	Floors in patches	m2	112
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Making good internal cement plaster

23	Walls in patches	m2	65
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Making good steel windows

24	Make good existing glazed steel window not exceeding 2.5m2 including sanding down thoroughly, apply metal primer and two coats gloss enamel paint, overhauling, adjusting and servicing existing ironmongery to leave complete unit in a perfect condition	No	5
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Bill No. 2
 Alterations
Durapi Consulting

Sundries

Note to Tenderers

The following work in relation to "High Pressure Cleaning" is to be sub-contracted out to Local SMME contractors. Tenderers are to refer to page number ??? , clause??? of the tender document for further information

High Pressure cleaning of face brick walls

25	Soot on face brick walls	m2	360		
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High Pressure cleaning of concrete, asphalt, etc.

26	Soot on floors	m2	1 762		
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Bill No. 2

Alterations

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<u>Risk of collapse of excavations</u>			
5	Sides of trench and hole excavations not exceeding 1,5m deep	m2	116
<u>Keeping excavations free of water</u>			
6	Keeping excavations free of all water other than subterranean water		Item
<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density</u>			
7	Under floors, steps, pavings, etc	m3	25
<u>Earth filling supplied by the contractor compacted to 95% Mod AASHTO density</u>			
8	G5 Under floors compacted in 150mm layers	m3	56
<u>Coarse river sand filling supplied by the contractor</u>			
9	Under floors etc	m3	1
<u>Compaction of surfaces</u>			
10	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density	m2	88
<u>Prescribed density tests on filling</u>			
11	"Modified AASHTO Density" test	No	5
<u>SOIL POISONING</u>			
<u>Soil insecticide</u>			
12	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	88
Carried to Collection			R
Bill No. 3 Earthworks (Provisional) Durapi Consulting			

Item No		Quantity	Rate	Amount
	<u>BILL NO. 4</u> <u>CONCRETE, FORMWORK AND REINFORCEMENT</u> Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
	<u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials</u> Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent <u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u> <u>10MPa/19mm concrete</u> 1 Surface blinding under footings and bases m3 4 <u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u> <u>15MPa/19mm concrete</u> 2 Surface beds and thickenings, etc cast in panels on waterproofing m3 10 <u>30MPa/19mm concrete</u> 3 Foundation slabs m3 23			
	Carried to Collection		R	
	Bill No. 4 Concrete, Formwork and Reinforcement Durapi Consulting			

<u>TEST BLOCKS</u>					
4	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	Sets	5		
<u>CONCRETE SUNDRIES</u>					
<u>Finishing top surfaces of concrete smooth with a power float</u>					
5	Surface beds, slabs, etc to falls	m2	88		
<u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u>					
<u>Smooth formwork to sides</u>					
6	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	4		
<u>MOVEMENT JOINTS ETC</u>					
<u>Two sheets of masonite with smooth surfaces as slip joints between horizontal concrete and brick surfaces including cement mortar bed</u>					
7	Not exceeding 300mm wide	m	80		
<u>Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces</u>					
8	12mm Joints not exceeding 300mm high	m	80		
<u>Saw cut joints</u>					
9	5 x 30mm Saw cut joints in top of concrete	m	20		
<u>REINFORCEMENT (PROVISIONAL)</u>					
<u>Mild steel reinforcement to structural concrete work</u>					
10	Various diameters to concrete slabs & beams, staircase, columns and foundations	t	2.01		
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Bill No. 4 Concrete, Formwork and Reinforcement Durapi Consulting					

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Item No		Quantity	Rate	Amount
	BILL NO. 5 MASONRY Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Civil/Structural Works (including SANS series) Information before pricing this Bill of Quantities			
	SUPPLEMENTARY PREAMBLES <u>Proprietary items or materials</u> Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent SUPPLEMENTARY PREAMBLES <u>Proprietary items or materials</u> Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent FOUNDATIONS (PROVISIONAL) <u>Brickwork of NFP bricks in class II mortar</u> <div style="display: flex; justify-content: space-between;"> 1 270mm Cavity wall comprising of two half brick wall skins including 50mm thick unreinforced concrete infill and wire ties m2 50 </div> SUPERSTRUCTURE <u>Brickwork of NFP bricks in class II mortar</u> <div style="display: flex; justify-content: space-between;"> 2 Half brick walls m2 38 </div>			
	Carried to Collection		R	
	Bill No. 5 Masonry Durapi Consulting			

3	Half brick walls in beamfilling	m2	19
4	270mm Cavity wall comprising of two half brick wall skins including 50mm thick unreinforced concrete infill and wire ties	m2	220
<u>BRICKWORK SUNDRIES</u>			
<u>Brickwork reinforcement</u>			
5	75mm Wide reinforcement built in horizontally	m	125
6	150mm Wide reinforcement built in horizontally	m	820
<u>Prestressed fabricated lintels</u>			
7	110 x 75mm Lintels in lengths not exceeding 3m	m	30
<u>Galvanised hoop iron cramps, ties, etc</u>			
8	30 x 1,6mm Roof tie 1,5m long with one end fixed to timber and other end built into brickwork	No	56
<u>Grill block</u>			
9	300 x 300 x 100mm Patterned grill block	No	20
<u>FACE BRICKWORK</u>			
<u>"Corobrik Silvergey Travertine FBX" or equally approved face bricks pointed with recessed horizontal and vertical joints</u>			
10	Extra over brickwork for face brickwork	m2	7
<u>Brick-on-edge header course copings, sills, etc of "Corobrik Firelight Travertine FBX" or equally approved face bricks pointed with recessed joints on all exposed faces</u>			
11	110mm Wide sill set sloping and slightly projecting	m	5
Carried to Collection			R
Bill No. 5 Masonry Durapi Consulting			

**NUTEC-CEMENT/FIBRE-CEMENT WINDOW
SILLS**

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

12	15 x 150mm Wide sills set flat and slightly projecting	m	12
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Carried to Collection

R

Bill No. 5
Masonry
Durapi Consulting

Item No		Quantity	Rate	Amount
	BILL NO. 6			
	WATERPROOFING			
	Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
	SUPPLEMENTARY PREAMBLES			
	Proprietary items or materials			
	Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent			
	DAMP-PROOFING OF WALLS AND FLOORS			
	One layer of 375 micron "Consol Plastics Brikgrip DPC" or equally approved embossed damp proof course			
1	In walls	m2	25	
2	In walls under sills	m2	4	
	One layer of 250 micron "Consol Plastics Gunplas USB Green" or equally approved waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"			
3	Under surface beds	m2	58	
	Carried to Collection			R
	Bill No. 6 Waterproofing Durapi Consulting			

JOINT SEALANTS ETC

"Bostik" or equally approved silicone sealing compound

4	In joints between frame and wall	m	127		
5	Applied with a pressure caulking gun sealing around sanitary fittings	m	17		

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

6	5 x 10mm In saw cut joints in floors	m	20		
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Carried to Collection

R

Bill No. 6
 Waterproofing
Durapi Consulting

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 7</u></p> <p><u>ROOF COVERINGS ETC</u></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary items or materials</u></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p><u>Sheeting:</u></p> <p>The roof sheeting shall be 0.55mm thick full hard IBR profile galvanised mild steel or other approved roof sheets, roll formed in continuous lengths and cut to length by a pneumatic cut-off process. A certificate verifying compliance to all current SANS codes in respect to galvanised sheeting shall be issued by the manufacturer</p> <p><u>Finishing of sheets:</u></p> <p>The paint finish shall be colour plus on one side and standard grey finish on the other side</p>			
Carried to Collection		R	
Bill No. 7 Roof Coverings, Claddings, etc. Durapi Consulting			

Fixing of sheets:

The roof sheeting shall be laid in long lengths, narrow flutes outermost, with single flute sidelaps facing away from prevailing wind. All sheets shall be secured to timber purlins utilising approved roofing screws in strict accordance to the manufacturers instructions. Sheeting is to be drilled and not punched, with side laps filled with approved Mastic sealant. Sheeting is to protrude a minimum of 50mm from ends of rafters

Flashings:

Flashings shall be approved by the manufacturer and fixed to the sheeting with approved fixings. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Flashing flanges shall be notched to the sheet profile where necessary. Care shall be taken to ensure that no sheeting or flashing will be cut with abrasive disc on roof surface in order to prevent steel spatter from penetrating colour coated areas

Erection:

Every precaution shall be taken to prevent damage to roof sheets during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, shall be replaced, at no additional cost to the contract

Safety:

The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity

Carried to Collection

Bill No. 7
Roof Coverings, Claddings, etc.
Durapi Consulting

R

Guarantee:

The manufacturer shall comply with ISO9002 Quality Management System. Sheeting shall be laid in strict accordance with manufacturers specifications by an approved contractor. A written and approved five (5) year guarantee of site workmanship and water tightness shall be issued after final inspection of roof sheets by the manufacturer

TILES

420 x 332mm "Coverland Renown" slate grey concrete tiles nailed with non-corrosive tile nails to 38 x 38mm sawn softwood battens at 320mm centres

1	Roof covering with pitch not exceeding 25 degrees	m2	56
2	Ridge tiles to match roofing tiles bedded and pointed in 1:3 cement mortar tinted to match tile colour	m	11

PROFILED FIBRE-CEMENT SHEETING AND ACCESSORIES

Supplementary preambles in connection with fixing of sheeting and accessories and laps are to be inserted when the Model Preambles for Trades (or other preambles not covering the fixing of sheeting and accessories and laps) are used

When the pitch of the roof is less than 9 degrees or if dustproofing is required then the description of roof covering "with side and end laps sealed" is to be used

0.7mm thick "Everite Big six" sheeting fixed to timber/steel purlins or rails

3	Roof covering with pitch not exceeding 25 degrees	m2	281
4	Ridge cappings 462mm girth	m	37
5	Hot dip galvanised metal polyclosures to under ridge capping and eaves	m	147

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Bill No. 7
Roof Coverings, Claddings, etc.
Durapi Consulting

R

6	Sondor IBR pattern polyclosure under ridge capping and eaves	m	79
7	Extra over roof sheet for fixing every crown at eaves	m	84
8	Extra over for fixing screws at every ridge	m	64
<u>ROOF AND WALL INSULATION</u>			
<u>Sisalation "FR 430 Industrial" multi- layered reinforced double-sided aluminium foil sheeting in accordance with SANS 10400 with a mass of not less than 251g/m² and a Class I fire rating in accordance with SANS 10177-3</u>			
9	Insulation sheeting laid taut over timber purlins (timber purlins elsewhere measured) and fixed concurrent with roof covering with minimum 150mm stapled laps including galvanised steel straining wires at not exceeding 400mm centres and double-sided tape at edges where required	m2	294
Carried to Collection			R
Bill No. 7 Roof Coverings, Claddings, etc. Durapi Consulting			

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 8</u></p> <p><u>CARPENTRY AND JOINERY</u></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Fixing:</u></p> <p>Items described as 'nailed' shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete</p> <p>Items described as 'plugged' shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as 'bolted', the bolts have been given elsewhere</p> <p><u>Joinery:</u></p> <p>Descriptions of frames shall be deemed to include frames, transomes, rails, etc.</p> <p>Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts</p> <p><u>Decorative thermosetting plastic laminate covering:</u></p> <p>Laminate covering shall be glued under pressure and edge strips of same shall be butt jointed at junctions with adjacent similar finish</p>			
<p>Carried to Collection</p>			
<p>Bill No. 8 Carpentry and Joinery Durapi Consulting</p>			

Prefabricated plate nailed timber roof truss construction:

NOTE: The following is applicable in respect of roof trusses:

The Contractor shall allow for all items deemed necessary for the proper design, fabrication and erection of the roof trusses, bracing, etc.

The materials and design of the roof construction shall be in accordance with the relevant edition of the South African National Standards (SANS) and the Standard Building Regulations (SBR)

The design of trusses and permanent bracing shall be carried out under the control of a registered professional engineer who shall provide the requisite certificate of stability on completion of the roof construction. All calculations and drawing, including a key plan of each building showing the position of each type of member shall be submitted timeously to the consulting Structural Engineer for his approval before fabrication is commenced

Prices are to include for the provision of adequate temporary bracing during construction to the approval of the Departmental Engineer

The dimensions in the descriptions of the trusses are nominal and actual measurements are to be obtained from the architect and/or the site before fabrication commences

Trusses must be designed in accordance with the environmental conditions of the area

The following roof trusses are to a pitch not exceeding 25 degrees (unless otherwise stated) spaced at approximately 1200mm centres and are to receive "Everite big six" profile roof sheets on timber purlins and a nailed up ceiling under

Carried to Collection

Bill No. 8
 Carpentry and Joinery
Durapi Consulting

R

Pretreatment of timber:

This service falls within the areas defined in the National Building Regulations for Treatment of Timber against insect pest affecting softwood fixed permanently in all buildings

The Regulations require that timber be treated in terms of the relevant SANS. Tenderers are to make allowance in their rates

Prefabricated roof trusses, etc:

All timber roof trusses including nail-plated trusses and bolted trusses with lapped members must comply with SANS

Prices for roof trusses are to include for all temporary bracing and supports and for all necessary top and bottom chord bracing, wind bracing and runners where required and overhanging ends are to be wrot faced all round

Plate nailed timber roof truss construction:

The following is applicable in respect of roof trusses: Trusses are at maximum 1200mm centres. Roof covering is 0,8mm thick IBR profile roof sheets on timber purlins. Ceilings are plasterboard on softwood brandering. The dimensions in the descriptions of the trusses are nominal and actual measurements are to be obtained from the Architect and/or the site before design or fabrication commences

PREFABRICATED ROOF TRUSSES, ETC.

The following in plate nailed timber roof trusses with pitch not exceeding 25 degrees from an approved supplier, delivered to site, hoisted into position, fixed and braced on timber wall plates to SABS 0243:

Prefabricated plate nailed timber roof truss construction

The following is applicable in respect of roof trusses:

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Bill No. 8
 Carpentry and Joinery
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[illegible]

7	76 x 76mm Splayed purlins	m	63
	Sundries		
8	Wrought faces on sawn timbers	m ²	14
9	Two coats creosote on sawn timbers	m ²	14
10	"Teco" or equally approved hurricane clips	No	416
11	2.5mm Diameter galvanised wire tie 400mm girth wrapped around rafter and purlin with ends tied together	No	496
	EAVES, VERGES, ETC		
	"Everite Flexit" or equally approved pressed nutec-cement		
12	12 x 220mm Fascias boards fixed to ends of rafters including galvanised steel H-profile joint strips	m	83
13	12 x 80 x 220mm Angle section barge boards fixed to ends of rafters including galvanised steel H-profile joint strips	m	92
	DOORS ETC		
	Flush panel semi-solid core door with "Sapele" or equally approved veneer to both sides hung to steel frames		
14	44mm Thick door size 813 x 2032mm high	No	7
	Flush panel solid doors with "Sapele" or equally approved veneer to both sides hung to steel frames		
15	44mm Thick door size 813 x 2032mm high	No	6
	Marine ply solid doors or equally approved veneer to both sides hung to wooden frames		
16	32mm Thick door size 900 x 2100mm high	No	3
	Carried to Collection		
	Bill No. 8 Carpentry and Joinery Durapi Consulting		

FRAMED FRAMES ETC

Wrought meranti

17	76 x 114mm Frames	m	15
Carried to Collection			R
Bill No. 8 Carpentry and Joinery Durapi Consulting			

Item No	Quantity	Rate	Amount
<u>BILL NO. 9</u> <u>CEILINGS, PARTITIONS AND ACCESS FLOORING</u> Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
<u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials</u> Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent <u>NAILED UP CEILINGS</u> <u>6mm "Everite Nutec" or equally approved plain boards with white PVC H-profile jointing strips over joints</u>			
1	Ceilings including 38 x 50mm sawn softwood brandering at 600mm centres with cross brandering at joints, ends of sheets and at light fittings, etc	m2	210
2	Extra over ceiling for 700 x 800mm trap door of wrought softwood rebated framing with one sawn softwood cross brander covered with ceiling board and fitted flush in opening	No	8
<u>"Everite Nutec" or equally approved fibre cement cornices</u>			
3	75mm Coved cornices	m	249
Carried to Collection			R
Bill No. 9 Ceilings, Partitions and Access Flooring Durapi Consulting			

"Isotherm" or equally approved insulation

4 100mm Insulation closely fitted and laid on top of
brandering between roof timbers etc

m2

210

Carried to Collection

Bill No. 9
Ceilings, Partitions and Access Flooring
Durapi Consulting

R

Bill No. 9
 Ceilings, Partitions and Access Flooring

COLLECTION

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Page
No

Amount

72

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Carried to Summary

R

Bill No. 9
 Ceilings, Partitions and Access Flooring
Durapi Consulting

Item No	Quantity	Rate	Amount
<u>BILL NO. 10</u> <u>IRONMONGERY</u> Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
<u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials</u> Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent <u>Finishes to ironmongery</u> Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black PB Polished brass PL Polished and lacquered PT Epoxy coated SD Sanded <u>HINGES, BOLTS, ETC</u> <u>"CISA" or equally approved</u>			
1	100mm Brass hinge	No 36	
2	"FWC.101.RL.SS" WC indicator and long turn knob	No 9	
<p style="text-align: right;">Carried to Collection</p> <p>Bill No. 10 Ironmongery Durapi Consulting</p>			R

LOCKS

"CISA" or equally approved

3	CISA "55220-57-20" EURO/OVAL profile mortice sach lock body with 57 mm C x C and 57mm backset (code EN12209)	No	11
4	CISA "C2000 0G300-07-12" EURO/OVAL profile double cylinder 59 mm 30/30 Grand master keyed (code EN1303)	No	2
5	CISA "C2000 0G302-07-12" EURO/OVAL profile knob cylinder 59 mm 30/30 Grand master keyed (code EN1303)	No	2

"CISA" or equally approved

6	"22010" 50mm Brass padlock	No	8
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HANDLES

"CISA" or equally approved

7	"DPS FP-D06-BB " Pull handle	No	9
8	"DPS FP-D6-A-XB-FF " Lever handle on 50 x150 blank plate with round corners - SS	No	6
9	"DPS FT08 " Lever handle on 50 x150 blank plate with latch only - SS	No	4
10	"DPS FT08 " Lever handle on 50 x150 x 1.2mm Thick blank plate with EURO profile cylinder hole - SS	No	3

DOOR CLOSERS

"CISA" or similar approved

11	"CISA" Asymmetric cam action slide channel door closer non hold open with a EN1-4 adjustable strength with back check (code - EN1154) colour Grey	No	2
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Carried to Collection

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Bill No. 10
Ironmongery
Durapi Consulting

LETTERS, NAMEPLATES, ETC

Signage

12	Provide a budgetary amount of R 50,000.00 (Fifty Thousand Rand) for statutory fire signage and general direction signage		Item	50 000.00
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BATHROOM FITTINGS

"Franke" or equally approved

13	"CHRX675" Toilet roll holder fixed to wall	No	10	
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SUNDRIES

"CISA" or equally approved

14	"GR304SS" door stop with rubber buffer	No	16	
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Carried to Collection

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Bill No. 10
 Ironmongery
Durapi Consulting

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 11</u></p> <p><u>METALWORK</u></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>			
	<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary items or materials</u></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p><u>Descriptions of bolts, anchors, etc.:</u></p> <p>Descriptions of bolts shall be deemed to include nuts and washers</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p> <p>Items described as 'holed for bolt(s)' shall be deemed to exclude the bolts unless otherwise described</p> <p>Items described as 'plugged' shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres</p> <p><u>Hot dipped galvanising:</u></p> <p>The mass of hot dip galvanised steelwork has been calculated on the mass before galvanising and no allowance has been made for the additional mass of galvanising for which allowance must be made in pricing</p>			
	Carried to Collection			
	<p>Bill No. 11</p> <p>Metalwork</p> <p>Durapi Consulting</p>		R	

Unless otherwise stated, all steelwork described as galvanised shall be deemed to include for 'hot-dip' galvanising in accordance with the latest SANS standards

WELDED GALVANISED SCREENS, GATES, ETC

Screens and gates

1	Stainless steel industrial type gate overall size 900 x 2100mm high	No	7
2	Stainless steel industrial type gate overall size 1350 x 2100mm high	No	1

GALVANISED PRESSED STEEL DOOR FRAMES

NOTE:

All door frames to be fitted with one and a half pair chromium plated on steel, brass butts with double nylon washers for each door leaf unless otherwise described and chromium plated striking plates

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

3	Frame for door 813 x 2032mm high	No	7
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1,2mm Rebated frames suitable for half brick walls

4	Frame for door 813x 2032mm high	No	9
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GALVANIZED STEEL WINDOWS, DOORS, ETC

NOTE:

All windows shall be fitted standard brass fittings as recommended by the manufacturer

Burglar bars shall be standard pattern 5 x 20mm flat section bars corresponding horizontally and vertically with glazing bars

Burglar bars shall be fitted to opening sections only

Carried to Collection

Bill No. 11
Metalwork
Durapi Consulting

R

Standard industrial windows by "Durowin" or similarly approved (unpainted) including burglar bars expanded mesh fixed in galvanised mild steel 50 x 50 mm angle frame sized to suit per schedule (600 x 900mm) and bolted to brickwork including necessary ironmongery

5 Window size 533 x 654mm high - (Code - NE 1) all as detailed on the architectural drawings attached to these bills of quantities

No

8

6 Window size 533 x 949mm high - (Code - NC5F) all as detailed on the architectural drawings attached to these bills of quantities

No

10

Carried to Collection

R

Bill No. 11
Metalwork
Durapi Consulting

Bill No. 11

Metalwork

COLLECTION

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Bill No. 11
 Metalwork
 Durapi Consulting

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 12</u></p> <p><u>PLASTERING</u></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary items or materials</u></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p><u>Method :</u></p> <p>The method to be used shall be either the monolithic method or the bonded method</p> <p><u>Preparation :</u></p> <p>For granolithic applied monolithically, the concrete floor shall be swept clean after bleeding of the concrete has ceased and the slab has begun to stiffen; any remaining bleed water shall be removed and the granolithic applied immediately thereafter. For granolithic to be bonded to the floor slab after it has hardened, the slab surface shall be hacked (preferably by mechanical means) until all laitance, dirt, oil, etc. is dislodged and swept clean of all loose matter. The slab shall then be wetted and kept damp for at least six hours before applying the granolithic</p>			
<p>Carried to Collection</p>			
<p>Bill No. 12 Plastering Durapi Consulting</p>			

Mix :

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

Panels :

Granolithic shall be laid in panels not exceeding 14m\`b2 for monolithic finishes, not exceeding 9,5m\`b2 for bonded finishes and not exceeding 6m\`b2 for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1,5 times its width

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

Laying :

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

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

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

Carried to Collection

Bill No. 12
 Plastering
Durapi Consulting

R

Curing, seasoning and protection :

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

Colour :

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

Note to Tenderers

The following work is to be sub-contracted out to Local SMME contractors. Tenderers are to refer to page number ??? , clause??? of the tender document for further information

SCREEDS

Screeds power floated on concrete

1	30mm Thick on floors and landings	m2	141
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INTERNAL PLASTER

Cement plaster on brickwork

2	On brick walls	m2	465
3	On narrow widths	m2	5

EXTERNAL PLASTER

Cement plaster on brickwork

4	On brick walls	m2	309
5	On narrow widths	m2	5

Carried to Collection

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Bill No. 12
 Plastering
Durapi Consulting

Item No	Quantity	Rate	Amount
<u>BILL NO. 13</u>			
<u>TILING</u>			
Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary items or materials</u>			
Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent			
<u>WALL TILING</u>			
<u>200 x 200mm "Shiny white" (Porcelain - code OSH100LA) floor tiles fixed with "Tal Professional" tile adhesive to bedding (bedding elsewhere) grouted with "Tal Quarrygrout" dark grey including movement joint all as detailed on Architects drawing attached to these bill of quantities</u>			
1	On walls	m2	30
2	On walls in isolated panels, splashbacks, etc	m2	7
3	Fair exposed cutting and fitting around pipe not exceeding 100mm internal diameter (Provisional)	No	8
4	Fair exposed cutting and fitting around pipe exceeding 100mm and not exceeding 200mm internal diameter (Provisional)	No	9
Carried to Collection			R
Bill No. 13 Tiling Durapi Consulting			

FLOOR TILING

600 x 600mm "Seattle grey" (Gres porcelain - code RG6151) floor tiles fixed with "Tal Professional" tile adhesive to bedding (bedding elsewhere) grouted with "Tal Quarrygrout" dark grey including movement joint all as detailed on Architects drawing attached to these bill of quantities

5	On floors and landings	m2	51	
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6	Skirting 75mm high of cut tiles	m	107	
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600 x 600mm "Tatum grey" (Inkjet porcelain GR1-code 10025IJ) floor tiles fixed with "Tal Professional" tile adhesive to bedding (bedding elsewhere) grouted with "Tal Quarry grout" dark grey including movement joint all as detailed on Architects drawing attached to these bill of quantities

7	On floors and landings	m2	22	
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8	Skirting 75mm high of cut tiles	m	32	
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300 x 300mm "Taurus Granite nero textured" (code R11 GR1) floor tiles fixed with "Tal Professional" tile adhesive to bedding (bedding elsewhere) grouted with "Tal Quarry grout" dark grey including movement joint all as detailed on Architects drawing attached to these bill of quantities

9	On floors and landings	m2	6	
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10	Skirting 75mm high of cut tiles	m	12	
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Carried to Collection

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Bill No. 13
Tiling
Durapi Consulting

Item No	Quantity	Rate	Amount
<u>BILL NO. 14</u>			
<u>PLUMBING AND DRAINAGE</u>			
<u>(PROVISIONAL)</u>			
Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Proprietary items or materials</u>			
Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent			
<u>RAINWATER DISPOSAL</u>			
<u>0.8mm Seamless aluminium</u>			
1	125 x 150mm Eaves gutters	m	87
2	Extra over eaves gutter for stopped end	No	32
3	Extra over 125 x 150mm eaves gutter for outlet for 100mm pipe	No	28
4	Extra over rainwater pipe for bend	No	48
5	Extra over rainwater pipe for shoe	No	28
6	125 x 75mm Rainwater pipes	m	74
Carried to Collection			R
Bill No. 14 Plumbing and Drainage Durapi Consulting			

SANITARY FITTINGS

"Vaal" or equally approved

- 7 400 x 321 x 170mm "Cobra welcome" wash hand basin small, white colour with two tap configuration bolted to wall using 1 x 2 x 8mm bolts (709000WH)

No

7

"Cobra" or equally approved

- 8 Cobra welcome" CC suite and seat with a 90 degree outlet washdown pan (772664WH) and 6 litre cistern complete with lid, fitments and flushpipe

No

9

"Grohe" or equally approved

- 9 Grohel Sanitaryware wall hung "Flatback" urinal. Overall size 355 x 337 x 552 mm (code G-39439000) Supplied with 38mm c.p. domical grating (code 8787Z0), c.p. top inlet spreader (code 8543Z0), and two hanger brackets (code 8127Z0) including horizontal urinal trap (code G-39732000)

No

1

TRAPS ETC

"Marley" or equally approved

- 10 38mm Deep seal "P" or "S" trap

No

2

"Cobra Watertech" or equally approved

- 11 32mm (CODE-301/N) bottle trap including C-342/1 with tail pipe, C-342/2 capnut and C-342/3 wall flange

No

7

TAPS, VALVES, ETC

Brass

- 12 22mm Bibcock with hose union

No

13

- 13 28mm Stopcock

No

14

- 14 28mm Fullway gate valve

No

16

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15	28mm Non-return valve	No	16
	<u>"Cobra" or equally approved</u>		
16	"Code - 1021-2CP" or equally approved CP Basin set comprising one pair 15mm "Push" pillar taps including basin waste plug (Code - KM2-102/N) or equally approved with chain, stay and backnut	No	7
17	"Code - 296" CP "Star" single taphole sink mixer set with overarm swivel outlet	No	2
18	106/15 CP toilet bibtap	No	8
	<u>WATER SUPPLIES</u>		
	<u>Class 1 copper pipes</u>		
19	15mm Pipes	m	65
20	22mm Pipes	m	30
21	15mm Pipes chased into brick walls	m	25
22	22mm Pipes chased into brick walls	m	11
	<u>Extra over class 1 copper pipes for capillary fittings</u>		
23	15mm Fittings	No	53
24	22mm Fittings	No	12
	<u>Copper overflow and service pipes</u>		
25	15mm Bent service pipe average 450mm girth and joint to copper and fittings	No	60
	<u>SANITARY PLUMBING</u>		
	<u>uPVC pipes</u>		
26	50mm Pipes	m	50
27	110mm Pipes	m	18
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	<u>Extra over uPVC pipes for fittings</u>				
28	50mm Bend	No	28		
29	50mm Access bend	No	7		
30	50mm Access junction	No	7		
31	110mm Access bend	No	8		
32	110mm End cap	No	9		
33	110mm Pan connector	No	9		
34	110mm Access reducing junction	No	8		
35	110mm Air vent cowl	No	9		
36	50mm "GI Two-way" vent valve	No	9		
	<u>TESTING</u>				
	<u>Sundries</u>				
37	Testing waste pipe system		Item		
	<u>Budgetary allowances</u>				
38	Provide the Amount of R 50 000.00 (Fifty thousand Rand) for the reconnections and new connections of sewer relocation to new buildings as determined by the Civil Engineers requirements		Item		50 000.00
39	Provide the Amount of R 45 000.00 (Forty Five thousand Rand) for the Utility mapping and Scanning of the water reticulation and sewer reticulation pipes to buildings as determined by the Civil Engineers requirements		Item		45 000.00
40	Provide the Amount of R 15,000.00 (Fifteen thousand Rand) for installation of water meter to record consumption as per the Architects requirements		Item		15 000.00
	Carried to Collection			R	
	Bill No. 14 Plumbing and Drainage Durapi Consulting				

Total Brought Forward from Page No.

Amount

93

R

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Item No	Quantity	Rate	Amount
<u>BILL NO. 15</u>			
<u>ELECTRICAL WORK</u>			
<u>Notes to Tenderers - Electrical and Electronic Services</u>			
<u>Notes to Tenderers</u>			
<p>These Bills of Quantities contain pages numbered consecutively in each Bill. Before the Tenderer submits his tender he should check the number of pages, and if any are found missing or duplicated, or the Bills of Quantities contain any obvious errors, he should apply to the Engineer at once and have same rectified, as no liability whatsoever will be admitted by the Engineer in respect of errors in tender due to the foregoing</p> <p>The Bills of Quantities form part of and must be read in conjunction with the Specification which document contains the full descriptions of the work to be done and material and equipment to be used and unless otherwise described in the Bills of Quantities, reference should be made to the Specification for the full meaning of descriptions of work to be done and materials and equipment to be used in this service</p> <p>Tenders shall be submitted for initial consideration on the declaration of the total value of the sectional Bills. The Bills priced in detail must be made available within 7 days upon request after the closing date of tenders</p> <p>The total tender price in the tender form shall constitute the contract price of the successful Tenderer. Sub-Contractors are advised to check their item extensions and total additions, as no claim for arithmetical errors will be considered</p>			
Carried to Collection			
			R
Bill No. 15 Electrical Work Durapi Consulting			

No alteration, erasure or addition is to be made in the text of the Bills of Quantities. Should any alteration, erasure or addition be made, it will not be recognised but the original wording of the Bills of Quantities will be adhered to

The Priced Bills of Quantities of the successful Tenderer will be checked and the Engineer reserves the right to call for adjustments to any individual price and to rectify any discrepancy whilst the total tender price, as submitted, remains unaltered

The responsibility for the accuracy of the quantities written into the Bills remains with the person who prepared the Bills. The Tenderer shall be relieved of responsibility of measuring quantities at the tender stage, and the tender sum submitted shall be in respect of the quantities set out in the Bills, although he will be required to make his assessment of items such as brackets, fixings, etc, from details stated in the Bills and shall include in the item prices for such small installation materials as are required for the complete installation in accordance with the Specification

The successful Tenderer and the Employer or his Agent may agree that the total of any Bill or Bills, including any variations by way of additions thereto or deductions therefrom, represents a fair and accurate quantification of the items set out in the Bills and the parties may agree final payment on that basis. In the event of any dispute as to the quantities, then the disputed item or items shall be adjusted where necessary

The quantities in these Bills of Quantities are provisional and subject to re-measurement and not to be used for ordering materials

Variations in the scope and extent of the work included in the Bills shall be allowed to meet the Employer's requirements and shall be measured and costed at rates entered in the Bills, where appropriate, and shall form an addition to or deduction from the total of the Bills

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Any items or variation for which rates have not been included in the Bills shall be agreed and priced as non-scheduled items in accordance with Section 32.0 of the JBCC Contract Series 2004

The rules governing the extent and costing of the variation where applicable shall apply as stated in the JBCC Contract Series 2004

Note : Amendment to Clause 32.6 of Section 32.0 : In addition Sub- Contractors shall submit to the Engineers within 14 days, details of expenses incurred as a result of a written site instruction or construction drawing revision

The tenderer is advised that any expenses incurred as a result of any verbal instruction not confirmed in writing or subsequent drawing revision issued for Construction shall be at the Sub-Contractors risk. All claims in this respect shall be nil and void

Unless a separate rate for the supply and for the installation of any item is specifically called for, the supply and installation costs of any item shall be fully included in unit price

The description of each item shall, unless otherwise stated herein, be held to include making, conveying and delivering, costs unloading, storing, unpacking, hoisting, scaffolding, setting, fitting and all necessary materials and equipment for fixing in position, cutting and waste, patterns, models and templets, plant, temporary works, return of packings, establishment charges, profit and all other obligations arising out of the conditions of contract

Sub-Contractors shall make allowance for extra over supports and fixings of all cable trays, ladder racks and all wireways and include all cost in the rates quoted. Sub-Contractors may submit an additional set of rates for extra over height allowance in the form as an addendum to the Bill of Quantities. A estimate of the quantities for extra over supports shall be tendered and priced accordingly. The sum total of which will be included in the Sub-Contractors price.

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All outlet boxes up to 100 x 100 mm are measured as one item regardless of the number of entries

All conduit rates shall include the termination thereof into Switchboards or any type of wireways. Conduit boxes shall always include the fixing to the conduit

Industrial switch and plug units shall include the fixing to conduit as specified. Outlet boxes shall be without covers and draw boxes shall include covers, screws, etc

Light switches, switch plugs, dimmer units, etc, shall include screws, coverplates and other equipment specified. All fittings and accessories always include the connections thereto. All light fittings shall be complete with lamps and tubes, unless otherwise stated in the Bill

300 mm additional length per conductor has been measured for conductors drawn into conduit, per termination point. Sub- Contractors must allow in their rate for any conductor lengths required for his own purposes, in addition to the 300 mm measured. All cables are measured gland to gland only and allowance must be made in the rates for any additional lengths

All measurements are nett, unless otherwise stated, and Sub- Contractors must allow in the rate for wastage

Where a schedule for quantities and point rates is included they shall form part of the tender price, but Sub-Contractors shall note that this item must be regarded as provisional and any work undertaken in accordance with the said rates is subject to a written instruction by the Electrical Engineer to this effect. All work priced on a "point rate" shall be claimed on a separate schedule

Sub-Contractors shall price the Preliminary & General under all of the three groups, viz :

A fixed amount. An amount varied in proportion to the final contract value as compared to the tender price.

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An amount varied in proportion to the final contract period as compared to the originally specified contract period

An amount varied in proportion to the final contract value as compared to the originally submitted contract value

The allocation of prices to the three categories listed above must be realistic and the Contractor may be required to justify the allocation of the prices.

All claims for Preliminary and General shall be made in proportion to the above three categories and authorised by the Electrical Engineer

Prime Cost (PC) Sums: The Sub-Contractor shall take delivery of, unpack, clean, assemble, store, protect and install all PC items as directed by the Engineer and he shall be responsible for all such items until the sub-contract works is completed and handed over. Sub-Contractors shall make due allowance for this in their tender price.

The Engineer will call for separate pricing of the PC Sums detailed within the provisional bills of quantities and the successful Specialist supplier/manufacturer will be appointed as a nominated supplier by the Sub-Contractor. The Sub-Contractor shall allow for purchasing and attending to the timeous delivery, loading and off-loading and storage on site of PC Sum items.

Note that the PC Sum amounts as provided in the provisional bills of quantities document exclude Sub Contractor's discount, and are therefore nett. Sub-Contractors are to indicate at tender submission stage any profit and mark-up (if required) on the PC Sum amounts. Should a profit mark-up not be indicated it will be assumed to be nil

Provisional Sums: All Provisional Sums shall only be expended as directed in writing , by the Engineer and any balance remaining shall be deducted from the amount of the contract sum

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All Provisional Sums shall be deemed to include for the supply and installation of specialist equipment or expertise by others. Only the material nett cost shall be subject to a percentage markup. All labour and travelling cost invoiced by the Specialist manufacturer/supplier will be as quoted and are nett

It shall be a specific condition of tender that the tenderer shall affect payment in full of any invoice submitted by the Specialist manufacture/supplier and subsequently approved by the Engineer. Payment shall be made in accordance with the Specialist manufacturer/suppliers quoted terms of payment, subject to :

No retention may be deducted from any invoice, unless this has been qualified/accepted beforehand in writing by the engineer

All materials have been accepted and signed for by the tenderer and that all are in good order and condition and comply with the specification(s).

Should the Sub-Contractor fail to affect payment on due date (subject to a written request for direct payment and presentation of the invoice due from the Specialist manufacturer/supplier) the Engineer shall arrange at his discretion for direct payment to the Specialist manufacturer/supplier the value of which shall be deducted from the Sub-Contractors current interim claim assessment.

The Sub-Contractor shall forfeit his mark up on the total value of the invoices in question where direct payment is made on his behalf

All items described as "Provisional" shall be measured as executed and paid for according to prices in the Bills of Quantities and any unexpended amounts shall be deducted from the amount of the contract sum. No work for which "Provisional" items are provided shall be commenced without written instructions from the Engineer

All claims for expenses incurred for Provisional Sums shall be supported with certified delivery notes and invoices from the Specialist manufacturer/supplier

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Within 21 days of receiving construction drawings the Electrical Sub- Contractor shall agree with the Consulting Electrical Engineer all quantities. Thereafter any variations to construction drawings will be based on the prices in the Bills of Quantities.

No claims for daywork labour rates will be accepted on this contract

Notes to Tenderers

1	Fixed amount	Item
2	Adjustable with Contract period	Item
3	Adjustable with Contract amount	Item

LV RETICULATION

LV Cable

Supply and install PVC/SWA/PVC/Cu Cables in ground, on surface and on cable tray

4	70mm ² 4 x Core	m	10
5	50mm ² 4 x Core	m	10
6	35mm ² 4 x Core	m	150
7	25mm ² 4 x Core	m	150
8	16mm ² 4 x Core	m	150
9	10mm ² 4 x Core	m	150
10	6mm ² 4 x Core	m	200

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26	16mm2	m	12	
27	10mm2	m	12	
28	6mm2	m	12	
29	4mm2	m	12	
<u>Cable Tray</u>				
<u>For PVC/SWA/PVC/Cu Cables including suspension brackets, drilling, fixing and levelling</u>				
30	200mm	m	50	
<u>Cable Tray Bends</u>				
31	200mm	No	2	
<u>Cable Tray Tees</u>				
32	200mm	No	2	
<u>Cable Tray Droppers or Risers (Vertical)</u>				
33	200mm	No	2	
<u>Cable Tray Suspension Brackets</u>				
34	Hanger Complete (to 300mm length)	No	10	
35	Hanger Complete (to 300mm to 1 000mm length)	No	10	
<u>Trunking</u>				
<u>Galvanised trunking for PVC/SWA/PVC/Cu Cables including suspension brackets, drilling, fixing and levelling, complete with metallic covers</u>				
36	P9000	m	50	
37	P8000	m	50	
38	P2000	m	100	
Carried to Collection				R
Bill No. 15 Electrical Work Durapi Consulting				

[illegible]

Trenching, Backfilling and Compacting

General trenching, backfilling and compacting in accordance with the specification and in accordance with SANS 10142-1

Trenching

53	Trenching in hand-pickable soil - 600mm wide x 800mm deep	m	10
54	Trenching in soft rock - 600mm wide x 800mm deep	m	10
55	Trenching in existing platform - 600mm wide x 800mm deep	m	10

Backfilling

56	Backfilling in layers accordance with specification	m	10
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Compacting

57	Compaction of layers as per specification	m	10
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Laying of LV Cables and Sleeves

General laying of cables in accordance with the specification and in accordance with SANS 10142-1

PVC Sleeves

58	Supply & installation of 110mm PVC sleeves as per specification	m	10
59	Supply & installation of 75mm PVC sleeves as per specification	m	10
60	Supply & installation of 50mm PVC sleeves as per specification	m	10

Danger Tape

61	Supply & installation of danger tape over LV cables	m	10
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Carried to Collection

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GENERAL ELECTRIC INSTALLATION

Conduit

Supply and install conduit including marking up, setting out, chasing and fixing into position including couplings, glue, bushings, etc.

PVC Conduit

Installed on surface in Ceiling Voids

68	20mm	m	10
69	25mm	m	10
70	32mm	m	10

Chased into Brick Wall

71	20mm	m	10
72	25mm	m	10
73	32mm	m	10

Cast into concrete/ built into Brick Walls

74	20mm	m	10
75	25mm	m	10
76	32mm	m	10

PVC Conduit Terminations

77	20mm	m	5
78	25mm	m	5
79	32mm	m	5

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Eastern Cape Region Programme Acceleration
East London to Berlin Corridor 1
Highgate Station

109	32A Single Phase 5-pin "welding socket" including plugtop	No	2		
	<u>Termination only onto equipment including flexible conduit and all accessories</u>				
110	Kitchen equipment	No	2		
111	Air-conditioning equipment	No	2		
112	Smoke ventilation equipment	No	2		
	<u>Light Switches & Controls</u>				
113	16A single pole light switch	No	2		
114	Motion Sensor	No	2		
115	Photocell (Royce-Thompson or similar)	No	2		
	<u>Luminaires</u>				
	All in accordance with the detailed specification and as indicated on the construction drawings				
	All quantities are strictly provisional and are subject to re measurement. Rates exclude the supply of the luminaire (measured elsewhere)				
116	Accept on site, store, install and connect up Type "S1" luminaire	No	2		
117	Accept on site, store, install and connect up Type "S2" luminaire	No	8		
118	Accept on site, store, install and connect up Type "S3" luminaire	No	2		
119	Accept on site, store, install and connect up Type "F" luminaire	No	6		
Carried to Collection				R	
Bill No. 15					
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Durapi Consulting					

Passenger Rail Agency of South Africa
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East London to Berlin Corridor 1
Highgate Station

<u>Point Rates</u>			
All in accordance with the detailed specification and as indicated on the construction drawings			
All quantities are strictly provisional and are subject to re measurement. Rates exclude the supply of the luminaire (measured elsewhere)			
120	Light Point for Type "S1" light fitting	No	2
121	Accept on site, store and install Type "S1" light fitting	No	2
122	Light Point for Type "S2" light fitting	No	8
123	Accept on site, store and install Type "S2" light fitting	No	8
124	Light Point for Type "S3" light fitting	No	2
125	Accept on site, store and install Type "S3" light fitting	No	2
126	Light Point for Type "F" light fitting	No	6
127	Accept on site, store and install Type "F" light fitting	No	6
128	Light Switch	No	2
<u>PC Sum for Luminaires</u>			
<u>Accept on site, store, install and connect-up</u> <u>Luminaires in accordance with SANS 10142-1 and</u> <u>the detailed specification</u>			
129	PC Sum for supply and delivery to site of luminaires as per the luminaire ordering schedule	Item	15 000.00
130	Add profit if required	Item	
Carried to Collection			R
Bill No. 15 Electrical Work Durapi Consulting			

<u>Testing, Commissioning and Handover</u>					
<u>Testing, commissioning and handover of installation in accordance with SANS 10142-1 and electrical drawings and specifications</u>					
131	Test and Commission the above installation and issue Electrical Certificate of Compliance on completion				SUM
<u>ICT SERVICES INSTALLATION</u>					
<u>Conduit</u>					
<u>Supply and install conduit including marking up, setting out, chasing and fixing into position including couplings, glue, bushings, etc.</u>					
<u>PVC Conduit</u>					
<u>Installed on surface in Ceiling Voids</u>					
132	20mm	m	10		
133	25mm	m	10		
134	32mm	m	10		
<u>Chased into Brick Wall</u>					
135	20mm	m	10		
136	25mm	m	10		
137	32mm	m	10		
<u>Cast into concrete/ built into Brick Walls</u>					
138	20mm	m	10		
139	25mm	m	10		
140	32mm	m	10		
Carried to Collection				R	
Bill No. 15 Electrical Work Durapi Consulting					

	PVC Conduit Terminations				
141	20mm	m	10		
142	25mm	m	10		
143	32mm	m	10		
	Steel Galvanised Conduit				
	Installed on surface in Ceiling Voids				
144	20mm	m	5		
145	25mm	m	5		
146	32mm	m	5		
	Chased into Brick Wall				
147	20mm	m	5		
148	25mm	m	5		
149	32mm	m	5		
	Steel Galvanised Conduit Terminations				
150	20mm	m	2		
151	25mm	m	2		
152	32mm	m	2		
	P8000 Trunking				
153	P8000 trunking	m	50		
154	P8000 bends	m	2		
155	P8000 ends	m	2		
156	P8000 dropper to Comms/Fire/Security Panel	m	2		
	Carried to Collection			R	
	Bill No. 15 Electrical Work Durapi Consulting				

	<u>300mm Cable Tray for Comms/ICT/Security</u>				
157	300mm Cable Tray	No	10		
158	300mm Cable Tray bends	No	2		
159	300mm Cable Tray vertical risers	No	2		
160	300mm Cable Tray Tee-pieces	No	2		
	<u>Comms/ICT/PA and Security System</u>				
	<u>All in accordance with the detailed specification and as indicated on the construction drawings</u>				
	<u>Access Control System</u>				
161	Digital keypad unit in 100x50mm box chased into wall with 1x25mm conduit link to ceiling void Comms trunking as per specification and drawings.	No	2		
162	Push Button Release unit in 100x50mm box chased into wall with 1x25mm conduit link to Comms trunking in ceiling void	No	2		
163	Provide 1x25mm conduit links to ceiling void for access control system as specified in the documentation and indicated on the drawings for connection by others	No	4		
164	Supply and install 220/48V power supply for security system connected to 16A dedicated SSO outlet	No	4		
	<u>ICT System</u>				
165	Indoor data/voice outlet in 100x100mm box chased into wall with 1x25mm PVC conduit link to Comms/ICT/Security trunking or distribution kiosk as per specification and drawings.	No	20		
166	Indoor data/voice outlet in 100x100mm box installed on surface on wall or structure with 1x25mm PVC conduit link to Comms/ICT/Security trunking or distribution kiosk as per specification and drawings.	No	10		
	Carried to Collection			R	
	Bill No. 15 Electrical Work Durapi Consulting				

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Eastern Cape Region Programme Acceleration
East London to Berlin Corridor 1
Highgate Station

167	Outdoor data/voice outlet in 100x100mm box installed on surface on wall or structure with 1x25mm galvanised conduit link to Comms/ICT/Security trunking or distribution kiosk as per specification and drawings.	No	35		
<u>CCTV System</u>					
168	Indoor data/voice outlet in 100x100mm box chased into wall with 1x25mm PVC conduit link to Comms/ICT/Security trunking or distribution kiosk as per specification and drawings.	m	5		
169	Outdoor data/voice outlet in 100x100mm box installed on surface on wall or structure with 1x25mm galvanised conduit link to Comms/ICT/Security trunking or distribution kiosk as per	No	20		
<u>Public Address (PA) System</u>					
170	Outdoor data/voice outlet in 100x100mm box installed on surface on wall or structure with 1x25mm galvanised conduit link to Comms/ICT/Security trunking or distribution kiosk as per specification and drawings.	No	6		
171	Supply and install 220/48V power supply for PA system connected to 16A dedicated SSO outlet	No	2		
<u>Communications System</u>					
172	Outdoor data/voice outlet in 100x100mm box installed on surface on wall or structure with 1x25mm galvanised conduit link to Comms/ICT/Security trunking or distribution kiosk as per specification and drawings.	No	4		
173	Supply and install 220/48V power supply for communications system connected to 16A dedicated SSO outlet	No	2		
Carried to Collection				R	
Bill No. 15 Electrical Work Durapi Consulting					

<u>Station Control Panel</u>					
<u>Supply and install Comms/Fire/Security station control panel on wall complete with P8000 trunking to ceiling void as per drawings and specification</u>					
174	Provide P8000 trunking from the surface mounted station control panel to the ceiling void for cable reticulation		Item		
<u>Comms/ICT/PA/Security Distribution Boards and Kiosks</u>					
<u>Supply and install Comms/Fire/Security DB on wall complete with P8000 trunking to ceiling void as per drawings and specification</u>					
175	600mm x 600mm x 100mm deep outdoor enclosure	No	1		
176	240mm x 190mm x 90mm deep IP65 enclosure	No	2		
177	150mm x 110mm x 70mm deep IP65 enclosure	m	1		
<u>Draw Wire</u>					
All in accordance with the detailed specification and as indicated on the construction drawings					
178	Supply & install galvanised draw wire in conduiting and sleeves	m	1 500		
<u>Attendance on the Comms/ICT/Security Contractors</u>					
All in accordance with the detailed specification and as indicated on the construction drawings					
179	Allow attendance on the ICT system (Data/Voice) Contractor		Item		
180	Allow attendance on the PA system Contractor		Item		
181	Allow attendance on the Security Contractor		Item		
Carried to Collection				R	
Bill No. 15 Electrical Work Durapi Consulting					

<u>Testing, Commissioning and Handover</u>			
<u>Testing, commissioning and handover of installation in accordance with SANS 10142-1 and electrical drawings and specifications</u>			
182	Test and Commission the above installation and issue Electrical Certificate of Compliance on completion	SUM	
<u>PRIME COST (PC) & PROVISIONAL SUMS</u>			
<u>Prime Cost (PC) Sums</u>			
183	PC Sum for Main Earth installation (by specialist)	Item	7 500.00
184	Add Profit if required	Item	
185	PC Sum for Earthing & Lightning Protection (by specialist)	Item	25 000.00
186	Add Profit if required	Item	
187	PC Sum for supply and installation of an alternate power supply (APS) system (by specialist)	Item	200 000.00
188	Add Profit if required	Item	
<u>Provisional Sums</u>			
189	Provisional Sum allowance for temporary power supplies	Item	5 000.00
190	Provisional Sum allowance for the removal of redundant equipment from site	Item	10 000.00
191	Provisional Sum allowance for disconnecting, making safe and stripping of the existing electrical installation on site	Item	10 000.00
Carried to Collection		R	
Bill No. 15 Electrical Work Durapi Consulting			

Platforms

Wireways & Reticulation

192	Supply & install P9000 trunking for small power and lighting installation as indicated on drawings and detailed in specification			SUM
193	Supply & install P8000 trunking for Communications, PA, CCTV, ICT and Security cabling as indicated on drawing and detailed in specification			SUM
194	Allowance for termination of P9000 trunking into Electrical Distribution board/kiosks	Item		
195	Allowance for termination of P8000 trunking into Comms, fire and security Distribution board/kiosks	Item		
196	Earthing of P9000 and P8000 trunking as indicated on drawings and detailed in specification	Item		
197	Total remaining installation related to the above excluding items listed above	Item		

Trenching, Backfilling and Compacting

General trenching, backfilling and compacting in accordance with the specification and in accordance with SANS 10142-1

Trenching

198	Trenching in existing platform - 600mm wide x 800mm deep	m	850	
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Backfilling

199	Backfilling in layers accordance with specification	m	850	
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Compacting

200	Compaction of layers as per specification	m	850	
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Carried to Collection

R

Bill No. 15
Electrical Work
Durapi Consulting

Passenger Rail Agency of South Africa
Eastern Cape Region Programme Acceleration
East London to Berlin Corridor 1
Highgate Station

	<u>PVC Sleeves</u>				
201	Supply & installation of 110mm PVC sleeves as per specification	m	850		
202	Supply & installation of 75mm PVC sleeves as per specification	m	250		
203	Supply & installation of 50mm PVC sleeves as per specification	m	250		
	<u>Danger Tape</u>				
204	Supply & installation of danger tape over LV cables	m	850		
	<u>Pre-cast Concrete Slabs</u>				
205	Supply & installation of 1200mm x 450mm pre-cast concrete slabs	m	850		
	<u>Concrete cable route markers</u>				
206	Supply & install concrete cable route markers as per specification	No	25		
	<u>Platform High Mast Lighting</u>				
207	PC Sum for supply and delivery to site of luminaires as per the luminaire ordering schedule		Item	1 120 000.00	
208	Profit		Item		
209	Light point for 9m split hinged high mast platform light fitting fed from LV platform reticulation kiosk	No	15		
210	Accept on site, store and install and connect-up the high mast light fitting including earthing & bonding, chasing, concrete, fixing and positioning as per the specification and drawings	No	15		
211	Supply & install photocell as indicated on drawings and detailed in specification for the high mast platform lighting		Item		
Carried to Collection					R
Bill No. 15 Electrical Work Durapi Consulting					

	<p><u>Earthing and Bonding</u></p> <p>General earthing and bonding of cable trays, trunking, powerskirting and Distribution Boards in accordance with SANS 10142-1</p>			
212	Bonding of Cable Tray	Item		
213	Bonding of Trunking	Item		
214	Bonding of Distribution Boards	Item		
215	Bonding of LV equipment (including Em Generators & UPS)	Item		
	<p><u>LV Distribution Boards and LV reticulation kiosks</u></p> <p>Accept on site, store, install and connect-up LV distribution boards and equipment in accordance with SANS 10142-1</p>			
216	PC Sum for supply and delivery to site of Submain distribution boards as per drawings and specifications	Item		15 000.00
217	Profit	Item		
218	Accept on site, store and install the Submain distribution boards ncluding earthing & bonding, chasing, concrete, fixing and positioning as per the specification and drawings	Item		
	<p><u>PC Sum for supply of general Luminaires</u></p> <p>Accept on site, store, install and connect-up Luminaires in accordance with SANS 10142-1 and the detailed specification</p>			
219	PC Sum for supply and delivery to site of general luminaires as per the luminaire ordering schedule	Item		15 000.00
220	Profit	Item		
	Carried to Collection		R	
	Bill No. 15 Electrical Work Durapi Consulting			

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Point Rates

All in accordance with the detailed specification and as indicated on the construction drawings

All quantities are strictly provisional and are subject to remeasurement. Rate exclud the supply of the luminaire (measured elsewhere)

221	Light Point for surface mounted light fittings (Type B and C)	No	25
222	Accept on site, store and install surface mounted light fitting	No	25
223	Light Point for surface mounted emergency battery back-up light fitting (Type BE and CE)	No	5
224	Accept on site, store and install surface mounted emergency battery back-up light fitting	No	5
225	Supply & install photocell as indicated on drawings and detailed in specification for the general platform lighting	No	2
226	16A Duo SSO in outdoor weatherproof yorkbox	No	2

Testing, Commissioning and Handover

Testing, commissioning and handover of installation in accordance with SANS 10142-1 and electrical drawings and specifications

227	Test and Commission the above installation and issue Electrical Certificate of Compliance on completion	Item
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Administration & Ticket Sales Offices

Wireways & Reticulation

228	Supply & install P9000 trunking for small power and lighting installation as indicated on drawings and detailed in specification	Item	750.00
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Carried to Collection

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229	Supply & install P8000 trunking for Communications, PA, CCTV, ICT and Security cabling as indicated on drawing and detailed in specification		Item	750.00
	<u>Powerskirting</u>			
	Supply and installation of powerskirting in accordance with the drawings and specifications and in accordance with SANS 10142-1			
230	Supply and installation of powerskirting as per drawings	m	20	
231	Supply and installation of powerskirting ends as per drawings	No	10	
232	Supply and installation of powerskirting corners as per drawings	No	10	
	<u>Earthing and Bonding</u>			
	General earthing and bonding of cable trays, trunking, powerskirting and Distribution Boards in accordance with SANS 10142-1			
233	Bonding of Cable Tray		Item	
234	Bonding of Trunking		Item	
235	Bonding of Powerskirting		Item	
236	Bonding of Distribution Boards		Item	
	<u>LV Distribution Boards and LV reticulation kiosks</u>			
	Accept on site, store, install and connect-up LV distribution boards and equipment in accordance with SANS 10142-1			
237	PC Sum for supply and delivery to site of Submain distribution boards as per drawings and specifications		Item	10 000.00
238	Profit		Item	
Carried to Collection				R
Bill No. 15 Electrical Work Durapi Consulting				

239	Accept on site, store and install the Submain distribution boards ncluding earthing & bonding, chasing, concrete, fixing and positioning as per the specification and drawings		Item		
	<u>PC Sum for supply of Luminaires</u>				
	Accept on site, store, install and connect-up Luminaires in accordance with SANS 10142-1 and the detailed specification				
240	PC Sum for supply and delivery to site of Submain distribution boards as per drawings and specifications		Item		10 000.00
241	Profit		Item		
	<u>Point Rates</u>				
	All in accordance with the detailed specification and as indicated on the construction drawings				
	All quantities are strictly provisional and are subject to remeasurement. Rates exclud the supply of the luminaire (measured elsewhere)				
242	Light Point for surface mounted light fittings (Type A, B and C)	No	8		
243	Accept on site, store and install surface mounted light fitting	No	8		
244	Light Point for surface mounted emergency battery back-up light fitting (Type AE, BE and CE)	No	2		
245	Accept on site, store and install surface mounted emergency battery back-up light fitting	No	2		
246	Light Switch	No	4		
247	Supply & install photocell as indicated on drawings and detailed in specification for the general platform lighting	No	2		
248	16A SSO surface on wall	No	4		
249	16A Dedicated (red) SSO surface on wall	No	2		
	Carried to Collection			R	
	Bill No. 15 Electrical Work Durapi Consulting				

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<u>Guard Houses and Public Areas</u>				
<u>Wireways & Reticulation</u>				
257	Supply & install P9000 trunking for small power and lighting installation as indicated on drawings and detailed in specification	Item		750.00
258	Supply & install P8000 trunking for Communications, PA, CCTV, ICT and Security cabling as indicated on drawing and detailed in specification	Item		750.00
<u>Earthing and Bonding</u>				
General earthing and bonding of cable trays, trunking, powerskirting and Distribution Boards in accordance with SANS 10142-1				
259	Bonding of Cable Tray	Item		
260	Bonding of Trunking	Item		
261	Bonding of Distribution Boards	Item		
<u>LV Distribution Boards</u>				
Accept on site, store, install and connect-up LV distribution boards and equipment in accordance with SANS 10142-1				
262	PC Sum for supply and delivery to site of Submain distribution boards as per drawings and specifications	Item		10 000.00
263	Profit	Item		
264	Accept on site, store and install the Submain distribution boards ncluding earthing & bonding, chasing, concrete, fixing and positioning as per the specification and drawings	Item		
<u>PC Sum for Luminaires</u>				
Accept on site, store, install and connect-up Luminaires in accordance with SANS 10142-1 and the detailed specification				
Carried to Collection			R	
Bill No. 15 Electrical Work Durapi Consulting				

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265	PC Sum for supply and delivery to site of luminaires as per the luminaire ordering schedule		Item		10 000.00
266	Profit		Item		
<u>Point Rates</u>					
All in accordance with the detailed specification and as indicated on the construction drawings					
All quantities are strictly provisional and are subject to remeasurement. Rates exclude the supply of the luminaire (measured elsewhere)					
267	Light Point for surface mounted light fittings (Type A, B and C)	No	6		
268	Accept on site, store and install surface mounted light fitting	No	6		
269	Light Point for surface mounted emergency battery back-up light fitting (Type AE, BE and CE)	No	2		
270	Accept on site, store and install surface mounted emergency battery back-up light fitting	No	2		
271	Light Switch	No	2		
272	Supply & install photocell as indicated on drawings and detailed in specification for the general platform lighting	No	2		
273	16A SSO in wall	No	3		
274	16A Dedicated (red) SSO in wall	No	2		
275	16A Dedicated (blue) SSO in wall	No	2		
276	Type "A" Workstation chased into wall	No	2		
277	Outlet for mechanical ventilation	No	2		
Carried to Collection					R
Bill No. 15 Electrical Work Durapi Consulting					

<u>Testing, Commissioning and Handover</u>					
	Testing, commissioning and handover of installation in accordance with SANS 10142-1 and electrical drawings and specifications				
278	Test and Commission the above installation and issue Electrical Certificate of Compliance on completion		Item		
<u>ICT Network infrastructure installation</u>					
<u>Network Equipment</u>					
279	Supply, install and configure - 8 port POE+ Managed L2 Network switch with 2x SFP included	No	2		
280	Supply, install and configure - Broadband Router with 3G/4G/5G failover capability and OPEN APN	No	2		
281	Single-port PoE over UTP Extender Kit	No	4		
<u>Fibre Optic Cabling</u>					
282	Supply and install 24 port Fibre patch panel, including all splicing and peripherals	No	4		
283	Supply and install multi-mode OM4 8-core fibre cabling	m	800		
284	Supply and install multi-mode 2m fibre patch leads	No	4		
<u>Station Control Panel</u>					
285	Supply and install 12U wall mounted Station control panel cabinet for network equipment with metal enclosure, perforated door, fans and 5 way PDU	No	2		
<u>Patch leads and Fly leads</u>					
286	Supply and install 1m CAT-6 fly leads	No	30		
287	Supply and install 1m CAT-6 patch leads	No	30		
288	Supply and install 3m CAT-6 fly leads	No	6		
Carried to Collection				R	
Bill No. 15 Electrical Work Durapi Consulting					

	<u>UPS installation</u>				
289	Supply and install 1200 VA UPS for Station control panel cabinet	No	2		
	<u>UTP cabling</u>				
290	Supply and install CAT-6 UTP data cabling points including final outlet, keystones	No	30		
291	Supply and install 24 way patch panel	No	2		
	<u>Training</u>				
292	Allow for training of two members of the Client's staff		Item		
	<u>Documentation</u>				
293	Prepare and submit 3 complete sets of manuals		Item		
	<u>CCTV System</u>				
	<u>Central Equipment</u>				
294	Supply and install VMS all-in-one server with built in 16 port POE+ switch as per specification (VMA-AS3-16P09)	No	2		
295	Supply and install Standard Camera Licence (ACC7-STD)	No	24		
296	Supply and install 27' LED monitor, to be installed on the VMS server for live viewing	No	2		
	<u>Field Equipment</u>				
297	Supply and install CAMERA TYPE 1, including all mounting brackets, flexible conduit from camera to final data point	No	2		
298	Supply and install CAMERA TYPE 2, including all mounting brackets, Ip 66 Housing, flexible conduit from camera to final data point	No	20		
	Carried to Collection				
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299	Supply and install CAMERA TYPE 3, including all mounting brackets, Ip 66 Housing, flexible conduit from camera to final data point	No	2		
	<u>Training</u>				
300	Allow for training of two members of the Client's staff		Item		
	<u>Documentation</u>				
301	Prepare and submit 3 complete sets of manuals		Item		
	<u>Testing and Commissioning</u>				
302	Testing and commissioning of installation in accordance with the specifications		Item		
	<u>Public Address (PA) system</u>				
	<u>Central Equipment</u>				
303	Supply and install TOA VM-3240VA System Management Amplifier station control cabinet. All software to be installed	No	2		
304	Supply and install desktop microphone	No	2		
	<u>Speakers</u>				
305	Supply and install Outdoor PA horn speakers as per specification	No	12		
306	Supply and install mounting brackets	No	12		
	<u>Cabling</u>				
307	Supply and install PA system outdoor audio cabling in sleeves and conduiting	m	800		
308	Cable terminations	No	16		
	<u>Training</u>				
309	Allow for training of two members of the Client's staff		Item		
Carried to Collection				R	
Bill No. 15					
Electrical Work					
Durapi Consulting					

	<u>Documentation</u>			
310	Prepare and submit 3 complete sets of manuals	Item		
	<u>Testing and Commissioning</u>			
311	Testing and commissioning of installation in accordance with the specifications	Item		
	<u>PC & Provisional Sums - Electronic Services</u>			
	<u>Prime Cost (PC) Sums</u>			
312	PC Sum for access control installation (by specialist)	Item	15 000.00	
313	Profit	Item		
314	PC Sum for communications system (by specialist)	Item	15 000.00	
315	Profit	Item		
	<u>Provisional Sums</u>			
316	Provisional Sum for CCTV system installation interface	Item	5 000.00	
317	Provisional Sum for ICT system installation interface	Item	5 000.00	
318	Provisional Sum for PA system installation interface	Item	5 000.00	
319	Provisional Sum for access control system installation interface	Item	5 000.00	
	<u>Electronic Services Installation Service Agreement</u>			
	<u>ICT Network Installation Service Level Agreement</u>			
	Provide a renewable Service Level Agreement (SLA) as per specifications for the comprehensive maintenance of the entire system once the initial 12-month warranty period expires			
320	Provide a Service Level Agreement - Year 2	Item		RATE ONLY
	Carried to Collection		R	
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321	Provide a Service Level Agreement - Year 3	Item	RATE ONLY
322	Provide a Service Level Agreement - Year 4	Item	RATE ONLY
323	Provide a Service Level Agreement - Year 5	Item	RATE ONLY
<u>Access Control and CCTV installation Service Level Agreement</u>			
	Provide a renewable Service Level Agreement (SLA) as per specifications for the comprehensive maintenance of the entire system once the initial 12-month warranty period expires		
324	Provide a Service Level Agreement - Year 2	Item	RATE ONLY
325	Provide a Service Level Agreement - Year 3	Item	RATE ONLY
326	Provide a Service Level Agreement - Year 4	Item	RATE ONLY
327	Provide a Service Level Agreement - Year 5	Item	RATE ONLY
Carried to Collection			R
Bill No. 15 Electrical Work Durapi Consulting			

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Item No		Quantity	Rate	Amount
	BILL NO. 16			
	<u>MECHANICAL WORK</u>			
	<u>FIRE SYSTEM</u>			
	<u>Twin booster connection and fire water storage tanks and reticulation piping</u>			
	All equipment as per SABS approved standards:			
	All costs for connecting, delivery, fittings, connections and hanging materials to be included.			
1	2000 L Sectional Steel Fire Water Storage Tanks	No	1	
2	1,5 l/s @ 6 bar Booster pump	No	2	
3	1,5l/s @ 6 bar Jockey pump	No	1	
4	Booster connection, twin brass 100mm with pressure gauge, glycerine filled 2500kPA	No	1	
5	Valve, non return 160mm including threaded/flange connections/joints	No	4	
6	Strainer 160mm including threaded/flange connections/joints	No	3	
7	Valve, isolator valve 160mm including threaded/flange connections/joints	No	9	
8	Valve, isolator valve 54mm including threaded/flange connections/joints	No	1	
9	160mm Concentric reducer	No	6	
10	160mm Flexible connection	No	6	
	Carried to Collection		R	
	Bill No. 16 Mechanical work Durapi Consulting			

11	Water meter for hydrant/hose reel system including threaded/flange connections/joints	No	1		
12	Pressure gauges	No	6		
<u>ABOVE GROUND PIPING</u>					
<u>Black mild steel BS62 installed as per SANS 10252 and manufacturers specifications</u>					
13	Pipe, med m/s 160mm	m	60		
14	Pipe, med m/s 100mm	m	40		
15	Pipe, med m/s 50mm	m	30		
16	Painting 160mm pipe, as per specification	m	60		
17	Painting 100mm pipe, as per specification	m	40		
18	Painting 50mm pipe, as per specification	m	30		
<u>FIRE HYDRANTS</u>					
All equipment as per SABS approved standards.					
All costs for connecting, delivery, fittings, connections and hanging materials to be included.					
19	Hydrant and hydrant landing valve, brass 100mm	No	1		
20	Pressure gauge, glycerine filled 1000kPA	No	1		
<u>FIRE HOSE REELS CONNECTING CLIP ON</u>					
All equipment as per SABS approved standards.					
All costs for connecting, delivery, fittings, connections and hanging materials to be included.					
21	Fire hose reel and connecting point, c/w 30m hose to EN694 standard	No	2		
Carried to Collection				R	
Bill No. 16 Mechanical work Durapi Consulting					

22	Pressure gauge, glycerine filled 1000kPA	No	2	
	<u>PORTABLE FIRE EXTINGUISHERS</u>			
	All equipment as per SABS approved standards.			
	All extinguishers to include mounting brackets.			
23	Extinguisher, 4,5kg DCP	No	3	
	<u>TESTING AND COMMISSION</u>			
24	Testing and commission, including all labour			SUM
	<u>SIGNAGE</u>			
	<u>Statutory signage</u>			
	Supply and installation of aluminium framed SABS 1186 approved photoluminescent type signage, as detailed below:			
25	190mm x 190mm High, single sided "running man + down arrow" (Code E3) sign with white lettering on a green background	No	3	
26	190mm x 190mm High, single sided "running man + left arrow" (Code E2) sign with white lettering on a green background	No	2	
27	190mm x 190mm High, single sided "running man + right arrow" (Code E1) sign with white lettering on a green background	No	2	
28	190mm x 190mm High, single sided "hose reel + extinguisher + down arrow" (Code F4) sign with red lettering on a white background	No	2	
29	190mm x 190mm High, single sided "hydrant + down arrow" (Code F15) sign with red lettering on a white background	No	1	
	Carried to Collection			R
	Bill No. 16 Mechanical work Durapi Consulting			

30	190mm x 190mm High, single sided "extinguisher + down arrow" (Code F13) sign with red lettering on a white background	No	3		
31	300mm x 150mm High, single sided "EXIT" (Code E6) sign with green lettering on a white background	No	3		
<u>AIR - CONDITIONING INSTALLATION</u>					
<u>Window wall unit</u>					
32	AC - 01 - Complete installation of Midea or similar approved 2.5 kW total cooling, window wall complete with refrigeration piping, steel brackets and 25mm diameter uPVC condensate drain piping for both indoor and outdoor units. Hand held remote control with wall mounted bracket	No	2		
33	Antitheft AC cage secured with security raw bolts	No	2		
<u>COLD WATER PLUMBING</u>					
Copper piping, complete as shown on the schematic drawings and specified in the detail project specification, including brackets, support, insulation, cladding and painting. Copper piping to conform to SANS 460 class 1 or 2 for pipe reticulation					
The following rates will be used for additions and omissions where applicable.					
<u>Cold water copper pipe work</u>					
34	35mm Diameter	m	8		
35	28mm Diameter	m	40		
36	22mm Diameter	m	50		
37	15mm Diameter	m	30		
Carried to Collection				R	
Bill No. 16 Mechanical work Durapi Consulting					

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54	Valve, non return 35 mm including threaded/flange connections/joints	No	2		
55	Strainer 35mm including threaded/flange connections/joints	No	1		
56	Valve, isolator valve 35mm including threaded/flange connections/joints	No	4		
57	35mm Concentric reducer	No	2		
58	35mm Flexible connection	No	2		
<u>DRAINAGE</u>					
<u>uPvc pipe including all necessary butt welds, electrowelds and expansion sockets in the running lengths fixed to soffit and walls with Sikla Holderbats, or chased into walls, etc.</u>					
59	110 mm HDPE pipe code 367.000.16.0	m	160		
<u>Extra over uPvc fittings including all necessary butt welds or electrowelds :</u>					
<u>Short eccentric reducer</u>					
60	160 x 110 mm Short eccentric reducer code 369.586.16.1	No	1		
<u>Bends</u>					
61	110 mm x 90 Degree Bend with long tailpipe code 367.055.16.1	No	14		
<u>Branch fittings (Junctions)</u>					
62	110 x 110 mm x 135° Y-branch code 367.135.16.1 (Junction)	No	5		
<u>Access Pipes, end caps, etc.</u>					
63	110 mm 135 Degree access pipe with round access cover code 367.453.16.1	No	5		
Carried to Collection				R	
Bill No. 16 Mechanical work Durapi Consulting					

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Total Brought Forward from Page No.

Amount

140

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Item No		Quantity	Rate	Amount
	<p>BILL NO. 17</p> <p>GLAZING</p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>			
	<p>SUPPLEMENTARY PREAMBLES</p> <p>Proprietary items or materials</p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p>Float glass</p> <p>The term 'float glass' is used for monolithic annealed glass</p> <p>Laminated glass</p> <p>Laminated glass to have polyvinyl butyral (PVB) interlayer(s)</p> <p>Certificate</p> <p>Rates for glazing shall include for the relevant glazing certificates to be issued at completion of project</p>			
	Carried to Collection		R	
	Bill No. 17 Glazing Durapi Consulting			

GLAZING TO STEEL WITH PUTTY

Note: Tenderers are referred to architect's drawings annexed to these bill of quantities.

Glazing to conform with "The South African Glass & Glazing Association (SAGGA)" and shall comply with the National Building Regulations and Building Standards Act 103 of 1977 and SANS 10137 Code of Practice for the Installation of Glazing in Buildings

6mm Clear toughened safety glass puttied in with steel window putty as per SANS 10400:N

- | | | | |
|---|---|----|---|
| 1 | Panes exceeding 0,1m2 and not exceeding 0,5m2 | m2 | 8 |
| 2 | Panes exceeding 0,5m2 and not exceeding 2m2 | m2 | 1 |

TOPS, SHELVES, DOORS, MIRRORS, ETC

6mm Silvered float glass copper backed mirrors with polished edges holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete

- | | | | |
|---|-------------------------|----|---|
| 3 | Mirror 550 x 550mm high | No | 6 |
|---|-------------------------|----|---|

Glazing Certificate

- | | | | |
|---|---|--|------|
| 4 | Issue of AAAMSA Glass & Glazing Certificate by registered and authorised entity | | Item |
|---|---|--|------|

Carried to Collection

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Bill No. 17
 Glazing
Durapi Consulting

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 18</u></p> <p><u>PAINTWORK</u></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary items or materials</u></p> <p>Proprietary items or materials where specified are to be of the brand specified or other approved by the Representative / Agent</p> <p><u>PAINTWORK ETC TO PREVIOUSLY PAINTED WORK</u></p> <p><u>Previously painted plastered surfaces</u></p> <p>Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth</p> <p><u>Previously painted metal surfaces</u></p> <p>Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal</p>			
<p>Carried to Collection</p>			<p>R</p>
<p>Bill No. 18 Paintwork Durapi Consulting</p>			

Previously painted wood surfaces

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

COLOURS

Colours, etc.

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

Note to Tenderers

The following work is to be sub-contracted out to Local SMME contractors. Tenderers are to refer to page number ??? , clause??? of the tender document for further information

ON INTERNAL FLOATED PLASTER SURFACES

One coat alkali resistant primer and two coats "Plascon Professional superior low sheen code (PEM 1000/TLS) /Professional gypsum and plaster primer code (PP700)" or other approved acrylic emulsion paint

1	Walls	m2	388	
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ON EXTERNAL FLOATED PLASTER SURFACES

One coat "Plascon professional superior low sheen code (PEM 1000/TLS) /Professional gypsum and plaster primer code (PP700) /Professional waterproofing compound (PWC520)" paint for exterior use or other approved acrylic emulsion paint

2	Walls	m2	263	
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Carried to Collection

Bill No. 18
Paintwork
Durapi Consulting

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ON CONCRETE TILES

Prepare surfaces and remove all loose material, apply one coat "Plascon nuroof cool acrylic roof paint (TRP 200) /Bonding liquid (CVI14)" or equally approved" paint

3	On roofs	m2	140		
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ON FIBRE-CEMENT

Prepare surfaces and remove all loose material, apply one coat "Plascon professional SuperiorLow Sheen code (PEM 1000) /professional gypsum & plaster primer code (PP700) or equally approved" paint

4	On fascias and barge boards	m2	31		
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5	On ceilings and cornices	m2	27		
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6	On roofs	m2	25		
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ON METAL

One coat primer, one undercoat and two coats "Dulux Easigloss D189-0734" gloss enamel paint (Colour to be approved by Project Manager)

7	On windows with burglar bars	m2	2		
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PAINTWORK ETC TO NEW WORK

ON INTERNAL FLOATED PLASTER SURFACES

One coat alkali resistant primer and two coats "Plascon Professional superior low sheen code (PEM 1000/TLS) /Professional gypsum and plaster primer code (PP700)" or other approved acrylic emulsion paint

8	Walls	m2	440		
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Bill No. 18
 Paintwork
Durapi Consulting

ON EXTERNAL FLOATED PLASTER SURFACES

One coat "Plascon professional superior low sheen code (PEM 1000/TLS) /Professional gypsum and plaster primer code (PP700) /Professional waterproofing compound (PWC520)" paint for exterior use or other approved acrylic emulsion paint

9	Walls	m2	303		
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ON CONCRETE TILES

Prepare surfaces and remove all loose material, apply one coat "Plascon Merit Plaster Primer or equally aproved" and two coats "Plascon Velvaglo Polyurethane Enamel or equally aproved" paint

10	On roofs	m2	79		
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ON FIBRE-CEMENT

Prepare surfaces and remove all loose material, apply one coat "Plascon Merit Plaster Primer or equally aproved" and two coats "Plascon Velvaglo Polyurethane Enamel or equally aproved" paint

11	On ceilings and cornices	m2	185		
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Prepare surfaces and remove all loose material, apply one coat "Plascon nuroof cool acrylic roof paint (TRP 200) /Bonding liquid (CVI14)" or equally aproved" paint

12	On roofs	m2	372		
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13	On fascias and barge boards	m2	38		
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Carried to Collection

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ON METAL

One coat primer, one undercoat and two coats "Velvagio water based code (VLW/TVW) / Metalcare galvanised iron primer code (GIP1) /Plascon universal Undercoat code (UC1)" paint (Colour to be approved by Project Manager)

14	On door frames	m2	15
15	On windows with burglar bars	m2	9

ON WOOD

Spot, sand down and prepare wood surfaces and apply three coats "Plascon Woodcare Woodcoat Polyurethane or equally aproved" matt clear varnish

16	On doors	m2	45
17	On door frames	m2	6

Prepare surfaces and remove all loose material, apply one coat "Plascon Merit Plaster Primer or equally aproved" and two coats "Plascon Velvagio Polyurethane Enamel or equally aproved" paint

18	On trusses	m2	18
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Bill No. 18

Paintwork

COLLECTION

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Paintwork

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Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 19</u></p> <p><u>EXTERNAL WORKS (PROVISIONAL)</u></p> <p>Tenderers are referred to the Model Preambles for All Trades as published by the Association of South African Quantity Surveyors (Tel. 011-315 4140) and the Architectural and Structural Works Information before pricing this Bill of Quantities</p>			
	<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Testing of materials and filling:</u></p> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series.</p> <p><u>Nature of ground</u></p> <p>Use "assumed to be" if no trial holes, soils investigations, etc have been carried out - discuss with engineer. Use "Trial holes indicate that" where the ground has been investigated by means of trial holes</p> <p><u>Nature of ground</u></p> <p>A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured</p> <p><u>Carting away of excavated material</u></p> <p>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</p>			
	Carried to Collection			
	<p>Bill No. 19</p> <p>External Work</p> <p>Durapi Consulting</p>		R	

DEMOLITIONS ETC

GENERAL NOTES

Demolitions, etc. shall be deemed to include for the removal of all rubble, debris, etc. from the site to a dumping-site to be found by the contractor

Old materials to become the property of the contractor

Old materials from alterations, except where described to be re-used or handed over, become the property of the contractor.

Old materials to be carted away

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

Old materials not to be re-used

Non of the old materials from alterations are to be used for new work, except where specifically described being set-aside for re-use

Handing over materials

Where certain materials or articles from demolitions or articles are described as to be handed over by the contractor to the Regional Representative or Representative/Agent, such materials or articles shall be property stored by the contractor, until handing over thereof. The contractor must obtain an official receipt listing the materials or articles and dates of handing over. If the contractor fails to submit the receipt when requested, it shall be deemed that the materials or articles are still in his possession and he will be held liable to the Department for the full replacement value thereof, which amount will be deducted from any monies due to the contractor

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Existing Furniture, Fittings, Equipment, etc

The contractor shall not remove or damage any furniture, fittings, equipment, etc unless otherwise indicated, and extreme care should be exercised not to damage any existing items. Items to be removed would be indicated as such in this Bills of Quantities, and it will in these instances be the responsibility of the contractor to protect and secure these items against damage or theft

Items to be removed, moved or disposed

Items to be removed, moved or disposed of by the contractor would be indicated as such in this Bills of Quantities, and it will in these instances be the responsibility of the contractor to protect and secure these items against damage or theft

Disconnection of services

The electrical installation, air-conditioning, telephone systems and fittings shall not be disconnected or disturbed in any way by the contractor, but due notice shall be given to the Principal Agent who would make the necessary arrangements for the removal, alterations, etc. thereto. The contractor will be liable for any damage to this work and shall make good at his own expense

Electrical - Mechanical - or airconditioning installation

The removal of, and alterations to, the electrical, mechanical or air conditioning installation shall be executed by the Electrical sub-contractor or a specialist contractor appointed by the contractor.

Light fittings, plug boxes and light switches will, where indicated by the Principal Agent, be taken down/out by the sub-contractor. The wires will also be drawn by the sub-contractor.

All the fittings, wires, etc will be handed to the Principal Agent

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Care to avoid structural or other damage

In taking down and removing existing work the utmost care shall be observed to avoid any structural or other damage to the remaining portions of the building. The contractor shall cover up and protect injury all work not removed and shall make good at his own expense any damage that may occur.

Care to/of existing surfaces, structures and finishes

All work must be done carefully so as not to damage or harm any existing adjoining surfaces. Any damage that occurs will be repaired to be the same as the original at the contractors expense

Dimensions and heights

The contractor is advised to check all dimensions and heights affecting the existing buildings on site against those indicated on the plans, as he will be held responsible for all new work being in the correct sizes. Should any discrepancies be found, he is to refer them to the Principal Agent for correction, before proceeding with the work

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Prices for demolitions

Prices for the demolition of any portion of the structure shall include for its demolition complete with all surfaces finishes such as plaster, screeds , etc, all attached items of joinery such as skirtings and all reinforcements, conduiting, pipes, lintels, etc. built into that portion of the structure.

Prices for the removal of doors and frames shall include for removal of fanlights, ironmongery, architraves and other associated trim.

Prices for the removal of windows shall include for the removal of glass, louvres, buglar bars attached to the window, window sills and blinds.

Prices for the removal of sanitary fittings shall include for the removal of all pipework, traps, brackets and fittings

Breaking up and removing

1	30mm asphalt	m2	50
2	150 x 250mm Concrete kerbs	m	25

Taking down and removing

3	Steel palisade fence 1800mm high with steel posts and droppers	m	20
4	Steel palisade pedestrian gate size 1000 x 2100mm high	No	2

Demolishing and removing

5	Prefabricated guard house size 1500 x 1200mm including cart away	No	1
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SITE CLEARANCE ETC

Note to Tenderes

The following work in relation to "Site Clearance" is to be sub-contracted out to Local SMME contractors. Tenderers are to refer to page number ??? , clause??? of the tender document for further information

Site clearance

- | | | | | |
|---|---|----|-------|--|
| 6 | Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, including spraying weed poison etc | m2 | 1 800 | |
|---|---|----|-------|--|

REMOVAL OF TREES ETC

Note to Tenderes

The following work in relation to "Removal of Trees" is to be sub-contracted out to Local SMME contractors. Tenderers are to refer to page number ??? , clause??? of the tender document for further information

Taking out and removing, grubbing up roots and filling in holes

- | | | | | |
|---|---|----|---|--|
| 7 | Tree stump exceeding 200mm and not exceeding 500mm girth | No | 2 | |
| 8 | Tree stump exceeding 500mm and not exceeding 1000mm girth | No | 1 | |

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TANKS, ETC.

Note to Tenderes

The following work in relation to "Water Tanks" is to be sub-contracted out to Local SMME contractors.
Tenderers are to refer to page number ??? , clause??? of the tender document for further information

Polyethylene water storage tanks

9	5000 Litres Jo-jo rainwater tank or similar approved, with 75mm Diameter opening for downpipe from gutter including 50mm Diameter overflow opening with 4mm Diameter galvanised wire looped through top of tank isolated with 15mm diameter hose to top of tank and anchored to top of slab with 'Hilti' hooks drilled into slab at all four corners and 15mm hose bib tap	No	2
<u>Tank stand</u>			
10	Excavation in earth not exceeding 2m deep to reduce levels	m3	11
11	Risk of collapse of sides of trench and hole excavations not exceeding 1,5m deep	m2	18
12	Extra over all excavations for loading, carting and dumping surplus excavated material (no allowance made for increase in bulk) off site to be located by the contractor	m3	3
13	Backfilling to trenches, holes, etc., with ditto	m3	1
14	Keeping excavations free of all water other than subterranean water		Item
15	10 Mpa Surface blinding under surface bed	m3	1
16	Reinforced concrete Class 25/19 in surface beds	m3	4
17	Class F1 formwork to soffits of slabs	m2	18
18	Steel reinforcement of various diameters to concrete work	t	0.34

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19	20mm COBRA 541 or equally aproved tank locking tap fitted to a 22mm extension pipe with barrel nipple & galvanised socket	No	2		
<u>THE FOLLOWING TO FENCING AND GATES</u>					
<u>Note to Tenderes</u>					
The following work in relation to "Fencing and Gates" is to be sub-contracted out to Local SMME contractors. Tenderers are to refer to page number ??? , clause??? of the tender document for further information					
<u>Palisade Fencing</u>					
20	Refurbishment of existing fencing and gates, the work shall include cutting off rusted metal and welding new sections to match existing where necessary, Cut off and remove all defected posts and replace with new galvanised steel post welded to existing fence including excavations , unreinforced concrete, backfilling and compaction to bases where necessary.Clean and remove all vegetation and debris. from the fence line and cart away. As determined by the Principal Agent	m	5		
21	Galvanised mild steel palisade fencing 1800mm high above ground level comprising 16 no. 65 x 2,5mm thick pales per 3000mm length panel, the pales finished with "trident" profile at the head and fixed with high tensile anti vandal nut to and including two 40 x 40 x 3mm thick horizontal angle members spaced at maximum 1500mm centres all fixed to 100 x 55 x 2.4mm thick IPE section posts at 3000mm centres with one anti sag support bracket per 3000mm length, the posts founded on 600 x 600 x 300mm deep unreinforced concrete base all as steel palisade including all necessary excavation, backfill, cart away etc.	m	20		
22	Steel palisade pedestrian gate size 900 x 2100mm high	No	2		
23	Steel palisade pedestrian gate size 1800 x 2100mm high	No	1		
Carried to Collection				R	
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THE FOLLOWING TO PLATFORM AREA

Alterations

24	Breaking up and removing 100mm thick mass concrete slabs	m2	220
25	Breaking up and removing 760 x 910 x 165mm Thick pre-cast concrete edge coping including cart away	m	95
26	Remove 150mm width of plaster on either side of crack, rake out crack: 10mm X 10mm deep, clean out all loose material, repair crack using Prostruct 506 Flexicoat polymer modified cementitious coating or similar approved, to Manufacturer's specification. Steel staples: Bend Y6 reinforcing bar 400mm long into 200mm staple length and two legs 100mm each. Drill 10mm diameter holes perpendicular to crack to receive staples and grout staples into holes with cement based non-shrinkage fluid grout to manufacturer's specifications. Spacing between staples not to exceed 150mm	m	10

Earthworks

27	Excavation in earth not exceeding 2m deep for reducing levels under floors	m3	77
28	Extra over trench and hole excavations in earth for excavation in soft rock	m3	8
29	Extra over trench and hole excavations in earth for excavation in hard rock	m3	1
30	Keeping excavations free of all water other than subterranean water		Item
31	Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 98% Mod AASHTO density for backfilling to trenches, holes, etc	m3	33
32	150mm Thick earth filling of G5 quality supplied by the contractor compacted to 90% Mod AASHTO density	m3	33

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33	Coarse river sand supplied by the contractor under floors etc	m3	11		
34	In-situ dry density (sand replacement) test in accordance with method A10 (a) of TMH 1	No	11		
35	One layer of 250 micron "Consol Plastics Gunplas USB Green or equally aproved" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape or equally aproved" under pavings	m2	220		
36	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 95% Mod AASHTO density	m2	220		
37	Soil poisoning under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	220		
<u>Concrete, Formwork & Reinforcement</u>					
38	30MPa/19mm Reinforced concrete in surface beds and thickenings, etc cast in panels on waterproofing	m3	22		
39	Finishing top surfaces of concrete smooth with a power float to surface beds, slabs, etc to falls	m2	220		
40	Type 193 fabric reinforcement	m2	220		
<u>Pre-cast concrete</u>					
41	Yellow tac tile paving "Way finding strip" comprising of 300 x 300 x 30mm thick cement tiles fixed with "Tal Professional" tile adhesive to bedding (bedding elsewhere) grouted with "Tal Quarrygrout" dark grey including movement joint all as detailed on Architects drawing No. 600-N attached to these bill of quantities	m2	72		
42	500 x 500x 50mm Thick "Terrazzo" platform with bull nosing, 200mm wide tread grooves including a 200mm wide smooth surface and 100mm wide white impregnated edge line all as detailed in engineers drawing No. 600-N attached to these bills of quantities	m	95		
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43	760 x 910 x 165mm Thick pre-cast concrete edge coping including laying slab with an approved adhesive and grout to floors as per structural engineers drawing No. PRASA -EL-STR-006	m	95		
<u>PLATFORM, NEW ROAD & PARKING EARTHWORKS</u>					
<u>Platform preparation at repair areas</u>					
44	Rip & Re-compaction of in-situ material to 90% Mod AASHTO	m3	150		
<u>Subgrade / selected layer</u>					
45	150mm Thick earth filling G7 quality material supplied by the contractor from commercial sources compacted to 93% Mod AASHTO	m3	80		
<u>Cut to spoil</u>					
46	Removal of unsuitable material from platform to spoil (including freehaul of 1km)	m3	300		
<u>Cart away</u>					
47	Extra over for carting away material in excess of the free haul to a dumping site to be located by the contractor	m3	300		
<u>REHABILITATION FOR PAVED AREAS</u>					
<u>Base layer</u>					
48	Construct base with imported G5 (3% cement) material from commercial sources compacted to 98% Mod AASHTO 150mm thick	m3	10		
<u>Process & stabilisation</u>					
	Process materials by means of stabilising				
49	Process by stabilising (3% cement)	m3	10		
	Stabilising agent				
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50	Portland cement	t	0.70		
<u>PLATFORM REHABILITATION FOR ASPHALT AREAS</u>					
<u>Basecourse layer</u>					
51	Construct base with imported G5 material of 150mm thick from commercial sources compacted to 98% Mod AASHTO	m3	120		
<u>ASPHALT BASE & SURFACING/PATCHING</u>					
<u>Bituminous surface treatment prime coat</u>					
52	50/70 Penetration-grade bitumen (0,7l/m2)	l	1 075		
<u>Tack coat</u>					
53	Tack coat of 30% stable grade emulsion (0,55l/m2)	l	900		
<u>Asphalt surfacing</u>					
54	Continuously fine grading using 50/70 penetration grade bitumen 30mm thick compacted to 93% MOD	m2	1 075		
	Sawing asphalt or cemented pavement layers for patching				
55	Sawing asphalt to an average depth not exceeding 200mm	m	450		
56	Excavation in existing pavement for patching in asphalt layer	m3	50		
<u>Treatment of the existing surface</u>					
	Treatment with diluted bituminous emulsion (Fogspray)				
57	30% Bitumen emulsion (0,4l/m2)	l	480		
58	150mm Cores in asphalt paving	No	2		
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ROAD MARKINGS

Non-reflectorized paint applied at nominal rate of 0.42 l/m2 or proprietary brand road marking material applied at nominal rate of 0.50 l/m2

59	100mm Wide yellow lines (broken or unbroken)	m	750	
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SEWER RETICULATION EXCAVATION

Excavations

Excavation in all materials for pipe trenches, backfill and compact to 90% Mod AASHTO Density, including the disposal of surplus material for pipe depths

60	1.0m and up to 2.0m	m	290	
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61	2.0m and up to 3.0m	m	130	
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Rock

62	Extra over for excavation in rock (Provisional amount only)	m3	130	
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63	Excavate unsuitable material from trench bottom (as directed by the engineer) and dispose	m3	85	
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Cart away

64	Extra over for hauling material in excess of the free haul distance (1km) beyond the site	m3	735	
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BEDDING OF PIPES

Bedding

Pipe bedding in accordance with SABS 1200 Drawing
No LB-1 rigid pipes with class"B" bedding

Bedding taken from trench excavations

65	Selected material in bedding cradle	m3	20	
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66	Selected material in fill blanket	m3	10	
	<u>Bedding taken from stockpile / borrow pit</u>			
67	Selected material in bedding cradle	m3	30	
68	Selected material in fill blanket	m3	50	
	<u>Bedding taken from commercial sources</u>			
69	Selected material in bedding cradle	m3	30	
70	Selected material in fill blanket	m3	100	
	<u>SEWER PIPEWORK & STRUCTURES</u>			
	<u>Supply, lay, joint, bed on class "B" bedding and test uPVC Maincore class 400 sewer pipes</u>			
71	160mm Diameter	m	405	
	<u>MANHOLES</u>			
	<u>Supply and install 1000mm nominal diameter manholes complete, as shown on drawing including excavation, backfilling, concrete, base, shaft, channels and step irons with precast concrete, manhole covers and frames Depth from top of cover to invert</u>			
72	0,5m and up to 2,0m	No	6	
73	2,0m and up to 3,0m	No	2	
	<u>Fittings</u>			
74	Construct manhole over existing sewer reticulation complete including benching Exceeding 2,0 m and up to 3,0 m	No	1	
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<u>Erf Connections:</u>			
<u>Supply building connections complete ending at the building boundary, irrespective of type, and including fittings</u>			
75	Connects directly into manhole (tie in with manhole invert level)	No	8
76	Connects into existing/new sewer pipe	No	2
77	Anchor Blocks (Class 15/19)	m3	15
<u>Cleaning of existing sewer (Provisional)</u>			
78	Survey of existing infrastructure	Item	20 000.00
79	Connect to existing sewer manhole with benching complete	Item	40 000.00
80	Remove and relocate the existing sewer pipeline	m	100
81	Inspect and test irrespective of pipe material and class	m	250
<u>WATER RETICULATION EXCAVATION</u>			
<u>Excavations</u>			
<u>Excavation in all materials for pipe trenches, selected backfill, compact to a minimum of 90% Mod AASHTO maximum density and dispose of excavated surplus material for pipes up to and including diameter for depths</u>			
82	Over and up to 0,0 to 1,5m	m	460
83	Excavate unsuitable material from trench bottom (as directed by the Engineer) and dispose	m3	80
84	Compact road crossings to 93% Mod AASHTO	m3	40
<u>Rock</u>			
85	Extra over for excavation in rock (Provisional amount only)	m3	150
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<u>BEDDING OF PIPES</u>					
<u>Bedding</u>					
Pipe bedding in accordance with SABS 1200 Drawing No LB-1 rigid pipes with class"B" bedding					
<u>Bedding taken from trench excavations</u>					
86	Selected material in bedding cradle	m3	10		
87	Selected material in fill blanket	m3	15		
<u>Bedding taken from commercial sources</u>					
88	Selected material in bedding cradle	m3	60		
89	Selected material in fill blanket	m3	140		
<u>WATER PIPEWORK & STRUCTURES</u>					
<u>Supply, handle, lay, joint, bed, test and disinfect HDPE PE100 PN16, complete with all couplings for outside diameters</u>					
90	75mm Diameter	m	390		
91	110mm Diameter	m	100		
<u>FITTINGS</u>					
<u>Extra over pipes for supply, lay and bedding for special bends</u>					
92	160 Diameter x 22.5 degrees	No	1		
93	160 Diameter x 45 degrees	No	2		
94	160 Diameter x 62.5 degrees	No	1		
95	160 Diameter x 90 degrees	No	2		
96	75mm FIRE hydrant tees complete with 1.2m riser coated and painted as per the FIRE requirements	No	3		
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Bill No. 19 External Work Durapi Consulting					

Passenger Rail Agency of South Africa
Eastern Cape Region Programme Acceleration
East London to Berlin Corridor 1
Highgate Station

<u>Hydrants</u>			
97	Install above ground fire hydrants complete	No	1
<u>VALVES</u>			
<u>Extra over pipes for cast iron valves: RSV's (Resilient Seal Gate Valves) class 16 to SABS 644 - 1974 for uPVC pipe flanged both ends (to SABS 1123 - 1972 table D) left hand closing, fitted with non-rising spindle with a cap and including any necessary concrete supports</u>			
98	160mm Diameter pipes	No	2
99	100mm Non-return valve, class 16 (PN16) with flanged	No	1
100	Ends drill to Table 1600/3 of SABS 1123, non rising spindle with cap top	No	2
101	100mm Epoxy coated heavy duty mild steel pipes and fittings in accordance to SANS 62 and as per standard details drawing		Item
			30 000.00
102	Pressure testing of pipeline network		Item
			25 000.00
<u>Anchor blocks</u>			
103	15 Mpa/38mm Strength concrete in anchor blocks, including excavation, trimming and formwork	m3	25
<u>Storage</u>			
104	Inspect and pressure test irrespective of pipe material and class		Item
			20 000.00
105	Leak detection		Item
			30 000.00
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Item No	Quantity	Rate	Amount
<u>BILL NO. 20</u>			
<u>PROVISIONAL SUMS</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>General</u>			
<p>Prime cost amounts and provisional sums are net. Prime cost amounts include for delivery to site of all articles concerned. Provisional sums are for material and equipment supplied and installed complete by firms of specialists</p>			
<u>General attendance on nominated/selected subcontractors:</u>			
<p>The item 'Attendance' which follows each provisional sum for nominated/selected subcontractors' work, shall be deemed to cover all the contractor's costs incurred in providing free of charge to the nominated/selected subcontractors, the following:</p>			
<p>1 The services as set out in clause B9.1 of the Preliminaries</p>			
<p>2 Making good in all trades and cleaning down and removal of rubbish on completion</p>			
<p>Special attendance on nominated/selected subcontractors</p>			
<p>Where stated special attendance will be described in detail in the Schedule for Variables in the Preliminaries for the services as set out in clause B9.2</p>			
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**PROVISIONAL SUMS FOR SELECTED
SUBCONTRACT WORKS**

Wayleave

- 1 Provide the Amount of R 150 000.00 (One Hundred and Fifty Thousand Rand) for the provision of wayleaves as per PRASA requirements

Item

150 000.00

Topographic Survey

- 2 Provide the Amount of R 35,000.00 (Thirty - Five Thousand Rand) for the provision of a topographic Survey as per the Structural Engineers requirements

Item

35 000.00

Precast concrete benches and waste bins

- 3 Provide the Amount of R 50,000.00 (Fifty thousand Rand) for the provision of precast concrete benches and waste bins as per the Architects requirements

Item

50 000.00

Geotechnical work

- 4 Provide the Amount of R 50,000.00 (Fifty thousand Rand) for the provision of geotechnical investigations as per the Civil/Structural engineers requirements

Item

50 000.00

Removal / replacement / repairs of roofs and external structures

- 5 Provide the Amount of R 75,000.00 (Seventy - five thousand Rand) for the removal and / or repairs / replacement to roof structure including roof coverings, rainwater goods, fascia/barge boards, etc where necessary as per the Principal Agent's instruction

Item

75 000.00

Shelving and joinery

- 6 Allow an Amount of R 20 000.00 (Twenty thousand Rand) for the replacement of shelving, cupboards, counters, joinery fittings, etc where necessary as directed by the Principal Agent

Item

20 000.00

- 7 Profit

Item

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Provisional Sums
Durapi Consulting

***Passenger Rail Agency of South Africa
Eastern Cape Region Programme Acceleration
East London to Berlin Corridor 1
Highgate Station***

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