

Item No	Quantity	Rate	Amount
<u>SECTION NO 1</u>			
<u>BILL NO 1</u>			
<u>PRELIMINARIES</u>			
<u>BUILDING AGREEMENT AND PRELIMINARIES</u>			
The JBCC Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described			
The JBCC Principal Building Agreement contract data form an integral part of this agreement			
The JBCC General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the JBCC Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these bills of quantities , amended as hereinafter described			
The contractor is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause			
The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only			
Where any item is not relevant to this agreement such item is marked N/A signifying "not applicable"			
Where standard clauses or alternatives are not entirely applicable to this agreement such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the abovementioned documents			
Carried Forward		R	
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<p style="text-align: right;">Brought Forward</p> <p><u>PREAMBLES FOR TRADES</u></p> <p>The General Preambles for Trades 2008 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</p> <p>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</p> <p>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</p> <p><u>STRUCTURE OF THIS PRELIMINARIES BILL</u></p> <p>Section A : A recital of the headings of the individual clauses in the aforementioned JBCC Principal Building Agreement</p> <p>Section B : A recital of the headings of the individual clauses in the aforementioned JBCC General Preliminaries</p> <p>Section C : Any special clauses to meet the particular circumstances of the project</p> <p><u>PRICING OF PRELIMINARIES</u></p> <p>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)</p>	<p style="text-align: right;">R</p>
<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries</p>	<p style="text-align: right;">R</p>

	Brought Forward		R
	<u>SECTION A: PRINCIPAL BUILDING AGREEMENT</u>		
	<u>Interpretation (A1-A7)</u>		
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		
	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		
	Carried Forward		R
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Brought Forward		R	
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:.....	Item		
2 Clause 2.0 - Law , regulations and notices			
F:..... V:..... T:.....	Item		
3 Clause 3.0 - Offer and acceptance			
F:..... V:..... T:.....	Item		
4 Clause 4.0 - Cession and assignment			
F:..... V:..... T:.....	Item		
5 Clause 5.0 - Documents			
Value Added Tax			
Provision is made in the summary page of these bills of quantities for the inclusion of Value Added Tax (VAT)			
The principal agent shall decide which portion of the priced document may be used as a specification of materials and goods or methods, if any.			
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	Brought Forward		R
6	<p>Priced document as specification</p> <p>Clause 5.4 is deemed to be deleted and replaced as follows.</p>		
7	<p>The principal agent shall decide which portion of the priced document may be used as a specification of material and goods or methods, if any.</p> <p>F:..... V:..... T:.....</p>	Item	
8	<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. <u>Architect</u></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> <p>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</p> <p>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</p> <p>1.2.3 The site [13.0]</p> <p>1.2.4 Compliance with the law, regulations and bylaws [2.1]</p>		
	Carried Forward		R
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Brought Forward			R	
1.2.5	Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works			
1.2.6	Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]			
1.2.7	Removal or re-execution of work			
1.2.8	Removal or substitution of any materials and goods			
1.2.9	Protection of the works			
1.2.10	Making good physical loss and repairing damage to the works [23.2.2]			
1.2.11	Rectification of defects [21.2]			
1.2.12	A list for practical completion specifying outstanding or defective work to be rectified to achieve practical completion , a list for completion and a list for final completion specifying outstanding or defective work to be rectified to achieve final completion			
1.2.13	Expenditure of budgetary allowances, prime cost amounts and provisional sums			
1.2.14	Appointment of a subcontractor [14.0; 15.0]			
1.2.15	Work by direct contractors [16.0]			
1.2.16	On suspension or termination, protection of the works , removal of construction equipment and surplus materials and goods [29.0]			
Carried Forward			R	
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Brought Forward	R
<p>2. <u>Quantity surveyor</u></p> <p>2.1 Duties [6.2] :</p> <p>The quantity surveyor is responsible for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions of the works</p> <p>2.2 Contract instructions [6.2; 17.1] :</p> <p>2.2.1 No contract instructions delegated to the quantity surveyor</p> <p>3. <u>Civil and structural engineer</u></p> <p>3.1 Duties [6.2] :</p> <p>The civil and structural engineer is responsible for all aspects of civil and structural engineering design and quality inspection of the works</p> <p>3.2 Contract instructions [6.2; 17.1] :</p> <p>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</p> <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>	
Carried Forward	R
<p>Section No. 1</p> <p>Bill No. 1</p> <p>Preliminaries</p>	

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<p style="text-align: right;">Brought Forward</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>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries</p>		R	

Brought Forward	R
<p>4. <u>Mechanical engineer</u></p> <p>4.1 Duties [6.2] :</p> <p>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</p> <p>4.2 Contract instructions [6.2; 17.1] :</p> <p>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</p> <p>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</p> <p>4.2.3 Compliance with the law, regulations and bylaws [2.1]</p> <p>4.2.4 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works</p> <p>4.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]</p> <p>4.2.6 Removal or re-execution of work</p> <p>4.2.7 Removal or substitution of any materials and goods</p> <p>4.2.8 Protection of the works</p> <p>4.2.9 Making good physical loss and repairing damage to the works [23.2.2]</p> <p>4.2.10 Rectification of defects [21.2]</p>	
Carried Forward	R
<p>Section No. 1</p> <p>Bill No. 1</p> <p>Preliminaries</p>	

Brought Forward		R	
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. <u>Electrical engineer</u>			
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			
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			
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<p style="text-align: right;">Brought Forward</p> <p>5.2.7 Removal or substitution of any materials and goods</p> <p>5.2.8 Protection of the works</p> <p>5.2.9 Making good physical loss and repairing damage to the works [23.2.2]</p> <p>5.2.10 Rectification of defects [21.2]</p> <p>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</p> <p>5.2.12 Expenditure of budgetary allowances, prime cost amounts and provisional sums</p> <p>6. <u>Wet services engineer</u></p> <p>6.1 Duties [6.2] :</p> <p>The wet services engineer is responsible for all aspects of wet services engineering design and quality inspection of the works</p> <p>6.2 Contract instructions [6.2; 17.1] :</p> <p>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</p> <p>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</p> <p>6.2.3 Compliance with the law, regulations and bylaws [2.1]</p> <p>6.2.4 Provision and testing of samples of materials and goods and/or of finishes and assemblies of elements of the works</p>		R	
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<p style="text-align: right;">Brought Forward</p> <p>6.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]</p> <p>6.2.6 Removal or re-execution of work</p> <p>6.2.7 Removal or substitution of any materials and goods</p> <p>6.2.8 Protection of the works</p> <p>6.2.9 Making good physical loss and repairing damage to the works [23.2.2]</p> <p>6.2.10 Rectification of defects [21.2]</p> <p>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</p> <p>6.2.12 Expenditure of budgetary allowances, prime cost amounts and provisional sums</p> <p>7. <u>Fire consultant</u></p> <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>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 1 Bill No. 1 Preliminaries</p>		R	

<p style="text-align: right;">Brought Forward</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> <p>7.2.12 Expenditure of budgetary allowances, prime cost amounts and provisional sums</p> <p>8. <u>Health and safety consultant</u></p> <p>8.1 Duties [6.2] :</p> <p>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:</p> <p>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</p> <p>8.1.2 Prepare and update the health and safety specification for the works</p>	<p style="text-align: right;">R</p>
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Brought Forward		R
8.1.3	Agree with the contractor the health and safety plan for the works	
8.1.4	Carry out regular audits to ensure adherence to the safety plan and compliance with the act and regulations	
8.1.5	Stop the execution of the works where the agreed specification or plan is not adhered to	
	F:..... V:..... T:.....	Item
9	Clause 7.0 - Design responsibility	
	F:..... V:..... T:.....	Item
<u>Insurances and securities (A8-A11)</u>		
10	Clause 8.0 - Works risk	
	F:..... V:..... T:.....	Item
11	Clause 9.0 - Indemnities	
	F:..... V:..... T:.....	Item
12	Clause 10.0 - Insurances	
	F:..... V:..... T:.....	Item
13	Clause 11.0 - Securities	
Guarantee for payment		
The employer shall provide to the contractor a guarantee for payment [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		
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		Brought Forward			R
		<p>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]</p> <p>F:..... V:..... T:.....</p> <p>Execution (A12 - A17)</p>			
14		<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>	Item		
		Carried Forward			R
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	Brought Forward		R
	F:..... V:..... T:.....	Item	
15	Clause 13.0 - Setting out		
	F:..... V:..... T:.....	Item	
16	Clause 14.0 - Nominated subcontractors		
	F:..... V:..... T:.....	Item	
17	Clause 15.0 - Selected subcontractors		
	F:..... V:..... T:.....	Item	
18	Clause 16.0 - Direct contractors		
	Attendance on direct contractors		
	In respect of direct contractors the contractor shall:		
	1. Designate an area for the direct contractor to establish a temporary office and workshop and storage of equipment and materials		
	2. Allow the use of personnel welfare facilities, where provided		
	3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation		
	4. Permit the direct contractor to use erected scaffolding, hoisting facilities, etc provided by the contractor , in common with others having the like right, while it remains erected on the site [16.1]		
	F:..... V:..... T:.....	Item	
	Carried Forward		R
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	Brought Forward		R	
19	<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> <p>F:..... V:..... T:.....</p> <p><u>Completion (A18 - A24)</u></p>	Item		
20	Clause 18.0 - Interim completion	N/A		
21	<p>Clause 19.0 - Practical completion</p> <p>F:..... V:..... T:.....</p>	Item		
22	<p>Clause 20.0 - Completion in sections</p> <p>F:..... V:..... T:.....</p>	Item		
23	<p>Clause 21.0 - Defects liability period and final completion</p> <p>F:..... V:..... T:.....</p>	Item		
24	<p>Clause 22.0 - Latent defects liability period</p> <p>F:..... V:..... T:.....</p>	Item		
25	<p>Clause 23.0 - Revision of the date for practical completion</p> <p>Substitution of materials and goods</p> <p>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]</p>			
	Carried Forward		R	
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Brought Forward		R
<p>F:..... V:..... T:.....</p>	Item	
<p>26 Clause 24.0 - Penalty for late or non-completion</p> <p>F:..... V:..... T:.....</p> <p><u>Payment (A25 - A27)</u></p>	Item	
<p>27 Clause 25.0 - Payment</p> <p>Clause Adjustment</p> <p>Clause 25.10 shall be adjusted from reading "fourteen (14) calendar days", to read "thirty (30) calendar days".</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	
<p>28 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>		
Carried Forward		R
<p>Section No. 1 Bill No. 1 Preliminaries</p>		

	Brought Forward	R	
	Cost of claims All costs incurred by the contractor in the preparation of claims shall be borne by the contractor . This provision shall not preclude an adjudicator or an arbitrator appointed in terms of this agreement [30.6 & 7] from making a determination on costs Claims from subcontractors The contractor shall review, assess and adjudicate any claims received by him from any subcontractor and thereafter submit same to the principal agent with a recommendation in order to assist the principal agent in adjudicating the claim [26.6] F:..... V:..... T:.....		
29	Clause 27.0 - Recovery of expense and/or loss F:..... V:..... T:.....	Item	
	Suspension and termination (A28 - A29)		
30	Clause 28.0 - Suspension by the contractor F:..... V:..... T:.....	Item	
31	Clause 29.0 - Termination F:..... V:..... T:.....	Item	
	Dispute resolution (A30)		
32	Clause 30.0 - Dispute resolution F:..... V:..... T:.....	Item	
33	Agreement		
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	Brought Forward		R	
	The required information of the parties and the amount of the contract sum shall be inserted in the agreement for signature of the agreement by the parties			
	F:..... V:..... T:.....	Item		
34	<u>Contract data</u>			
	Tenderer's selections			
	Before submission of his tender the contractor is to complete the tenderer's selections in the contract data			
	F:..... V:..... T:.....	Item		
	<u>SECTION B: GENERAL PRELIMINARIES</u>			
	<u>Definitions and interpretation (B1)</u>			
35	Clause 1.1 - Definitions			
	F:..... V:..... T:.....	Item		
36	Clause 1.2 - Interpretation			
	F:..... V:..... T:.....	Item		
	<u>Documents (B2)</u>			
37	Clause 2.1 - Checking of documents			
	F:..... V:..... T:.....	Item		
38	Clause 2.2 - Availability of construction information			
	F:..... V:..... T:.....	Item		
39	Clause 2.3 - Ordering of materials and goods			
	F:..... V:..... T:.....	Item		
	Carried Forward		R	
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Brought Forward			R	
<u>Previous work and adjoining properties (B3)</u>				
40	Clause 3.1 - Previous work - dimensional accuracy F:..... V:..... T:.....	Item		
41	Clause 3.2 - Previous work - defects F:..... V:..... T:.....	Item		
42	Clause 3.3 - Inspection of adjoining properties F:..... V:..... T:.....	Item		
<u>The site (B4)</u>				
43	Clause 4.1 - Handover of site in stages F:..... V:..... T:.....	Item		
44	Clause 4.2 - Enclosure of the works F:..... V:..... T:.....	Item		
45	Clause 4.3 - Geotechnical and other investigations F:..... V:..... T:.....	Item		
46	Clause 4.4 - Encroachments F:..... V:..... T:.....	Item		
47	Clause 4.5 - Existing premises occupied F:..... V:..... T:.....	Item		
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	Brought Forward		R	
48	Clause 4.6 - Services - known F:..... V:..... T:.....	Item		
	<u>Management of contract (B5)</u>			
49	Clause 5.1 - Management of the works F:..... V:..... T:.....	Item		
50	Clause 5.2 - Progress meetings F:..... V:..... T:.....	Item		
51	Clause 5.3 - Technical meetings F:..... V:..... T:.....	Item		
	<u>Samples, shop drawings and manufacturer's instructions (B6)</u>			
52	Clause 6.1 - Samples of materials F:..... V:..... T:.....	Item		
53	Clause 6.2 - Workmanship samples F:..... V:..... T:.....	Item		
54	Clause 6.3 - Shop drawings F:..... V:..... T:.....	Item		
55	Clause 6.4 - Compliance with manufacturer's instructions F:..... V:..... T:.....	Item		
	Carried Forward		R	
	Section No. 1 Bill No. 1 Preliminaries			

	Brought Forward		R	
	<u>Deposits and fees (B7)</u>			
56	Clause 7.1 - Deposits and fees F:..... V:..... T:.....	Item		
	<u>Temporary services (B8)</u>			
57	Clause 8.1 - Water F:..... V:..... T:.....	Item		
58	Clause 8.2 - Electricity F:..... V:..... T:.....	Item		
59	Clause 8.3 - Ablution and welfare facilities F:..... V:..... T:.....	Item		
60	Clause 8.4 - Communication facilities F:..... V:..... T:.....	Item		
	<u>Prime cost amounts (B9)</u>			
61	Clause 9.1 - Responsibility for prime cost amounts <i>Where details of materials for which prime cost amounts are to be allowed <u>are</u> readily available, the quantity surveyor may elect to insert the relevant prime cost amounts in measured items, which measured items shall contain sufficient detail for the contractor to price for fixing and installation, waste, etc</i> F:..... V:..... T:.....	Item		
	Carried Forward		R	
	Section No. 1 Bill No. 1 Preliminaries			

		R	
Brought Forward			
<u>Attendance on subcontractors (B10)</u>			
62	<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	
63	<p>Clause 10.2 - Special attendance</p> <p><i>It is important to note that general attendance only requires the contractor to "permit the subcontractor to use erected scaffolding, hoisting facilities, etc provided by the contractor, in common with others having the like right while it remains erected on the site" (refer to 12.2.13 of the JBCC n/s subcontract agreement). Many n/s subcontractors qualify their tenders to exclude scaffolding and/or hoisting facilities. Especially scaffolding could be an expensive item and it may be necessary in order to avoid claims to require the contractor to provide for the extended use of scaffolding for specific subcontracts within a description of "special attendance" in the applicable bill</i></p> <p>F:..... V:..... T:.....</p>	Item	
<u>General (B11)</u>			
64	<p>Clause 11.1 - Protection of the works</p> <p>F:..... V:..... T:.....</p>	Item	
65	<p>Clause 11.2 - Protection/isolation of existing works and works occupied in sections</p> <p>F:..... V:..... T:.....</p>	Item	
		R	
Carried Forward			
<p>Section No. 1</p> <p>Bill No. 1</p> <p>Preliminaries</p>			

	Brought Forward		R
66	<p>Clause 11.3 - Security of the works</p> <p>F:..... V:..... T:.....</p>	Item	
67	<p>Clause 11.4 - Notice before covering work</p> <p>F:..... V:..... T:.....</p>	Item	
68	<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	
69	<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>		
70	<p>Clause 11.7 - Works cleaning and clearing</p> <p>F:..... V:..... T:.....</p>	Item	
	Carried Forward		R
	<p>Section No. 1 Bill No. 1 Preliminaries</p>		

		R	
Brought Forward			
71	<p>Clause 11.8 - Vermin</p> <p>F:..... V:.....</p> <p>T:.....</p>	Item	
72	<p>Clause 11.9 - Overhand work</p> <p>F:..... V:.....</p> <p>T:.....</p>	Item	
73	<p>Clause 11.10 - Tenant installations</p> <p>F:..... V:.....</p> <p>T:.....</p>	Item	
74	<p>Clause 11.11 - Advertising</p> <p>F:..... V:.....</p> <p>T:.....</p>	Item	
<u>SECTION C: SPECIFIC PRELIMINARIES</u>			
75	<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:.....</p> <p>T:.....</p>	Item	
		R	
Carried Forward			
<p>Section No. 1</p> <p>Bill No. 1</p> <p>Preliminaries</p>			

	Brought Forward			R	
76	<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			
77	<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			
78	<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 Forward			R	
	<p>Section No. 1</p> <p>Bill No. 1</p> <p>Preliminaries</p>				

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	Brought Forward		R	
79	<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		
80	<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>	Item		
81	<p>Health and safety</p> <p>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]</p>			
	Carried Forward		R	
	<p>Section No. 1 Bill No. 1 Preliminaries</p>			

	Brought Forward		R	
	<p>The contractor shall:</p> <ol style="list-style-type: none"> 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 <p>F:..... V:..... T:.....</p> <p>Comply with all legislative requirements relating to COVID compliance and protocols.</p>	Item		
82	<p>F:..... V:..... T:.....</p>	Item		
83	<p>Broad based black economic empowerment (BBBEE)</p> <p>Tenders submitted will be evaluated taking into account their empowerment rating</p> <p>The employer will be monitoring the broad based black economic empowerment (BBBEE) status of the contractor throughout the execution of the works</p> <p>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</p> <p>F:..... V:.....T:.....</p>	Item		
	Carried Forward		R	
	<p>Section No. 1 Bill No. 1 Preliminaries</p>			

	Brought Forward		R	
84	<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		
85	<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		
86	<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		
	Carried Forward		R	
	<p>Section No. 1 Bill No. 1 Preliminaries</p>			

Brought Forward

R

SUMMARY OF CATEGORIES

Category : Fixed R.....

Category : Value R.....

Category : Time R.....

Carried to Final Summary

R

Section No. 1
Bill No. 1
Preliminaries

Item No	Quantity	Rate	Amount
<p><u>SECTION NO 2</u></p> <p><u>BILL NO 1</u></p> <p><u>ALTERATIONS</u></p> <p><u>NOTES:</u></p> <p>Attention is directed to the relevant sections of the Model Preambles for Trades (2008 edition) as published by the Association of South African Quantity Surveyors, which form part of this Bill of Quantities and must be read in conjunction therewith.</p> <p><u>SUPPLEMENTARY PREAMBLES</u></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>Explosives</u></p> <p>No explosives whatsoever may be used in demolitions</p>			
<p>Carried Forward</p>			<p>R</p>
<p>Section No. 2 Bill No. 1 Alterations</p>			

<p style="text-align: right;">Brought Forward</p> <p><u>General</u></p> <p>The contractor shall carry out the whole of the work with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide and erect any temporary tarpaulins and temporary plumbing that may be necessary during the progress of the works, all to the satisfaction of the architect, and remove when directed</p> <p>Any water supply pipes and other piping that may be met with 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 architect</p> <p>Doors, fanlights, fittings, frames, linings, etc shall be thoroughly overhauled before refixing including taking off, easing and rehanging, cramping up, re-wedging as required and making good cramps, dowels, etc, and easing, oiling, adjusting and repairing ironmongery if necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber</p>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 2 Bill No. 1 Alterations</p>		R	

Brought Forward				R
<p>Where doors, windows, etc are described as taken out this shall be understood to include for removal of all beads, architraves, ironmongery, etc and doors which are re-fixed are to be provided with new architraves (elsewhere measured)</p> <p>Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc and making good to match existing</p> <p>With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, etc, shall be levelled and prepared for raising of brickwork</p> <p>Allow for making good all existing plastered walls where damaged by furniture, etc, and stopping up all screw and nail holes before painting</p> <p>Making good of finishes shall be deemed to include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary</p> <p>The contractor will be required to take all dimensions affecting the existing building on the site and he will be held solely responsible for the accuracy of all such dimensions</p> <p>All materials must be carefully removed, loaded, transported, off loaded and neatly stacked at the employer's salvage yard. The Contractor must liase with the salvage yard regarding hours of operation and how materials must be delivered and stacked</p> <p><u>REMOVAL OF EXISTING WORK</u></p> <p><u>Hacking up and removing ceramic tile floor finish and skirting, including removing mortar bed or backing from concrete and preparing surfaces for new screed, tile finish, etc</u></p>				
1	Ceramic tiles to floors	m2	1,051	
Carried Forward				R
<p>Section No. 2 Bill No. 1 Alterations</p>				

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	Brought Forward			R
	<u>Hacking up and removing laminate floor finish, including removing adhesive or backing from concrete and preparing surfaces for new screed, laminate floor finish, etc</u>			
2	Laminate covering to floors	m2	335	
	<u>Hacking up and removing vinyl floor finish, including removing adhesive or backing from concrete and preparing surfaces for new screed, vinyl floor finish, etc</u>			
3	Vinyl covering to floors	m2	814	
	<u>Hacking up and removing carpet floor finish, including removing adhesive or backing from concrete and preparing surfaces for new screed, carpet floor finish, etc</u>			
4	Carpet covering to floors	m2	150	
	<u>Taking out and removing sundry joinery work, fittings, etc</u>			
5	Single door size 950 x 2 032mm high	No	20	
6	Double door, size 1 800 x 2 032mm high	No	5	
	<u>Taking down and removing ceilings, etc.</u>			
7	Suspended ceilings, including shadowline cornices, aluminium tees, etc	m2	1,880	
8	Gypsum plasterboard ceilings, including cornices, timber bandering, etc	m2	470	
	<u>PREPARATORY WORK TO EXISTING SURFACES</u>			
	<u>Preparatory work to existing surfaces</u>			
9	Scarify existing concrete floor slab to receive new finish	m2	2,350	
	<u>MAKING GOOD OF FINISHES, ETC ALL TO MATCH EXISTING IN EVERY RESPECT</u>			
	<u>Making good internal cement plaster</u>			
10	In patches	m2	5,298	
	Carried Forward to Summary of Section No. 2			R
	Section No. 2			
	Bill No. 1			
	Alterations			

Item No		Quantity	Rate	Amount
	BILL NO 2			
	CARPENTRY AND JOINERY			
	<u>NOTES:</u>			
	Attention is directed to the relevant sections of the Model Preambles for Trades (2008 edition) as published by the Association of South African Quantity Surveyors, which form part of this Bill of Quantities and must be read in conjunction therewith.			
	SUPPLEMENTARY PREAMBLES			
	<u>Joinery</u>			
	Descriptions of frames shall be deemed to include frames, transomes, mullions, rails, etc			
	Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes			
	<u>Fixing</u>			
	Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete			
	<u>Decorative laminate finish</u>			
	Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish			
	DOORS, ETC			
	<u>Solid laminated external quality flush doors with commercial veneer on both sides hung to steel frames</u>			
1	40mm Door, size 950 x 2032mm high	No	20	
2	40mm Double door, size 1 800 x 2 032mm high	No	5	
	Carried Forward to Summary of Section No. 2		R	
	Section No. 2 Bill No. 2 Carpentry and Joinery			

Item No		Quantity	Rate	Amount
	<u>BILL NO 3</u>			
	<u>CEILING, PARTITIONS AND ACCESS FLOORING</u>			
	<u>NOTES:</u>			
	Attention is directed to the relevant sections of the Model Preambles for Trades (2008 edition) as published by the Association of South African Quantity Surveyors, which form part of this Bill of Quantities and must be read in conjunction therewith.			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>Descriptions</u>			
	Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete			
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted", the bolts are measured elsewhere			
	<u>Bulkheads</u>			
	Bulkheads are those areas of the ceiling which occur at a level or plane differing from the general ceiling or plane in a particular room or area and which generally occur along the perimeter of the room or area. Their purpose is either to conceal services or to create an architectural feature by changing levels			
	Bulkheads will only be measured as such when they conform with the above description and when the horizontal or vertical dimensions do not exceed 1,2m. Should these dimensions be more than 1,2m then the horizontal or vertical ceilings will be included in the general ceiling measurements			
	Carried Forward		R	
	Section No. 2 Bill No. 3 Ceilings, etc			

Brought Forward			R
<u>Flush margins and borders</u>			
Flush margins and borders not exceeding 1200mm wide of materials differing from the general ceiling material are given in metres separated into groups of successive widths of 300mm			
<u>Proprietary suspended ceilings</u>			
Electric light fittings, diffusers, panels, etc generally are "lay in" units of the same dimensions as the suspension grid described and allowance shall be made accordingly for their support, inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing shall take cognisance thereof)			
<u>NAILED UP CEILINGS</u>			
<u>4mm "Everite Nutec", or similar approved, fibre-cement boards with T-type profile bischoff pressed steel jointing strips</u>			
1	Ceilings including 38 x 38mm sawn softwood bandering at 450mm centres	m2	353
2	Horizontal bulkheads, including 38 x 38mm sawn softwood bandering at 450mm centres and cross bandering at 900mm centres	m2	118
3	Circular cutting	m	20
<u>"Rhino" gypsum plasterboard, or similar approved, cornices</u>			
4	75mm Gypsum coved cornice plugged to wall	m	50
<u>SUSPENDED CEILINGS</u>			
<u>0,60 x 0,60m Vinyl faced acoustic gypsum board panels, or similar approved, on "Donn" pre-painted exposed tee suspension system, including main and cross tees, necessary hangers, grids, etc</u>			
5	Ceilings suspended not exceeding 1m below timber purlins with 38 x 38mm bandering at 600mm centres	m2	235
Carried Forward			R
Section No. 2 Bill No. 3 Ceilings, etc			

Brought Forward				R
	<u>0,60 x 1,20m Vinyl faced acoustic gypsum board panels,</u> <u>or similar approved, on "Donn" pre-painted exposed tee</u> <u>suspension system, including main and cross tees,</u> <u>necessary hangers, grids, etc</u>			
6	Ceilings suspended not exceeding 1m below soffits with 38 x 38mm branding at 600mm centres	m2	1,645	
<p>Carried Forward to Summary of Section No. 2</p> <p>Section No. 2 Bill No. 3 Ceilings, etc</p>				R

Item No		Quantity	Rate	Amount
	<u>BILL NO 4</u>			
	<u>FLOOR COVERINGS, ETC</u>			
	<u>NOTES:</u>			
	Attention is directed to the relevant sections of the Model Preambles for Trades (2008 edition) as published by the Association of South African Quantity Surveyors, which form part of this Bill of Quantities and must be read in conjunction therewith.			
	<u>FLOOR COVERINGS</u>			
	<u>Supply and fix wooden 8mm laminated flooring (PC Amount R350/m2) with and including laying over underlay of polyurethane sheet and foam complete with nosing and all accessories etc, all complete as per direction of Architects specification</u>			
1	On floors	m2	335	
2	Circular cutting to laminated flooring	m	10	
	<u>'Nexus Nec Bac' needle punch resin back carpet tiles size 500 x 500mm, or similar approved, installed strictly in accordance with the manufacturer's specification and SANA 10186</u>			
3	On floors	m2	150	
4	Circular cutting to carpet tiles	m	10	
	<u>300 x 300 x 2mm "Marleyflex", or similar approved semi-flexible vinyl tiles</u>			
5	On floors	m2	814	
	<u>POLISH, SEALERS, ETC</u>			
	<u>Three coats wax polish</u>			
6	On vinyl floors	m2	814	
	Carried Forward to Summary of Section No. 2		R	
	Section No. 2			
	Bill No. 4			
	Floor Coverings			

Item No		Quantity	Rate	Amount
	<u>BILL NO 5</u>			
	<u>PLASTERING</u>			
	<u>NOTES:</u>			
	Attention is directed to the relevant sections of the Model Preambles for Trades (2008 edition) as published by the Association of South African Quantity Surveyors, which form part of this Bill of Quantities and must be read in conjunction therewith.			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>GRANOLITHIC</u>			
	<u>Method</u>			
	The method to be used shall be either the monolithic method or the bonded method			
	<u>Preparation</u>			
	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			
	<u>Mix</u>			
	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			
	Carried Forward		R	
	Section No. 2 Bill No. 5 Plastering			

<p style="text-align: right;">Brought Forward</p> <p><u>Panels</u></p> <p>Granolithic shall be laid in panels not exceeding 14m² for monolithic finishes, not exceeding 9,5m² for bonded finishes and not exceeding 6m² 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</p> <p>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</p> <p><u>Laying</u></p> <p>Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels</p> <p>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</p> <p>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</p> <p><u>Curing, seasoning and protection</u></p> <p>Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying</p> <p><u>Colour</u></p> <p>Coloured granolithic shall be tinted with an approved colouring pigment mixed into a true and even colour</p>		R	
<p style="text-align: right;">Carried Forward</p> <p>Section No. 2 Bill No. 5 Plastering</p>		R	

Brought Forward				R
<u>SCREEDS</u>				
<u>Cement plaster screed wood floated on concrete</u>				
1	30mm Thick on floor and landings	m2	1,175	
Carried Forward to Summary of Section No. 2				R
Section No. 2				
Bill No. 5				
Plastering				

Item No	Quantity	Rate	Amount
<u>BILL NO 6</u>			
<u>TILING</u>			
<u>NOTES:</u>			
Attention is directed to the relevant sections of the Model Preambles for Trades (2008 edition) as published by the Association of South African Quantity Surveyors, which form part of this Bill of Quantities and must be read in conjunction therewith.			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Fixing</u>			
Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding			
Tiling described as "fixed with adhesive on power floated concrete" shall be deemed to include for approved tiling key-coat			
Ceramic, porcelain, marble and granite tiles are to be fixed and grouted with suitable adhesives and grouts from the "Tal Professional" ("Tylon") range of products as recommended by the manufacturer of the tiles			
<u>FLOOR TILING</u>			
<u>450 x 450 x 8mm "Grade A" glazed ceramic floor tiles (PC Amount R400/m2) fixed with adhesive to screed (screed measured elsewhere) and flush pointed with tinted waterproof jointing compound</u>			
1	On floors and landings	m2	1,051
2	Circular cutting	m	15
Carried Forward to Summary of Section No. 2			R
Section No. 2			
Bill No. 6			
Tiling			

Item No		Quantity	Rate	Amount
	<u>BILL NO 7</u>			
	<u>PAINTWORK</u>			
	<p><u>NOTES:</u></p> <p>Attention is directed to the relevant sections of the Model Preambles for Trades (2008 edition) as published by the Association of South African Quantity Surveyors, which form part of this Bill of Quantities and must be read in conjunction therewith.</p>			
	<u>SUPPLEMENTARY PREAMBLES</u>			
	<u>DESCRIPTIONS</u>			
	Descriptions of paintwork shall be deemed to include for all cutting in			
	<u>PREPARATORY WORK TO EXISTING WORK</u>			
	<p>Previously painted plastered surfaces 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>Previously painted metal surfaces Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal</p> <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</p>			
	<u>PAINT SPECIFICATIONS</u>			
	All painting shall be done in accordance with either "Plascon" or "Dulux", or similar approved specifications, where applicable.			
	Carried Forward		R	
	Section No. 2 Bill No. 7 Paintwork			

Brought Forward			R
<u>PAINTWORK, ETC TO NEW WORK ON</u>			
<u>PLASTER BOARD SURFACES WITH</u>			
<u>One coat alkali resistant plaster primer and two coats PVA acrylic emulsion paint on</u>			
1	Ceilings and cornices, including priming metal coverstrips and nailheads	m2	470
<u>WOOD SURFACES WITH</u>			
<u>One coat oil wood primer, one coat universal undercoat and two coats super universal enamel paint on</u>			
2	Doors	m2	120
<u>PAINTWORK, ETC TO PREVIOUSLY PAINTED WORK ON</u>			
<u>FLOATED PLASTER SURFACES WITH</u>			
<u>One coat alkali resistant plaster primer and two coats PVA acrylic emulsion paint on</u>			
3	Internal walls	m2	5,298
<u>METAL SURFACES WITH</u>			
<u>Spot priming defects in pre-primed surfaces with zinc phosphate metal primer, one coat universal undercoat and two coats super universal enamel paint on steel</u>			
4	Door frames	m2	48
Carried Forward to Summary of Section No. 2			R
Section No. 2			
Bill No. 7			
Paintwork			

**VAAL UNIVERSITY OF TECHNOLOGY
VANDERBIJLPARK CAMPUS
REMEDIAL WORKS TO THE PS BUILDING**

Bill No	SECTION SUMMARY - Remedial Works	Page No	Amount
1	Alterations	35	
2	Carpentry and Joinery	36	
3	Ceilings, etc	39	
4	Floor Coverings	40	
5	Plastering	43	
6	Tiling	44	
7	Paintwork	46	
Carried to Final Summary			R
Section No. 2			

**VUT – DISABILITY UNIT AND AFRICAN LANGUAGES CENTRE BUILDING AT
MAIN CAMPUS VANDERBIJLPARK**

Refurbishment of HVAC Installation: Price and Work Schedule

Rev:0

Item	Description	Unit	Qty	Rate	Amount
	<i>It should be noted that this is not a complete Bill of Quantities but rather a price schedule that include the work that is required. The Contractor should use the information provided as well as own site assessment data to provide a total costed schedule of work required to reinstate the systems to full good working condition.</i>				
1	SYSTEM DESCRIPTION				
	The building is fitted with heat pump type Samsung DVMS variable refrigeration volume system with conditioned fresh area supply and two extraction systems for the toilet ventilation. The ground, first, second and third floors as well as the fresh air supply are each fitted with a separate system.				
	The system layout for each floor is indicated on the following drawings:				
	J9164-001 VUT Ground Floor HVAC Layout Rev 3-A1				
	J9164-002 VUT First Floor HVAC Layout Rev 3-A1				
	J9164-003 VUT Second Floor HVAC Layout Rev 3-A1				
	J9164-004 VUT Third Floor HVAC Layout Rev 3-A1				
	J9164-005 VUT Roof Level HVAC Layout Rev 2-A1				
2	FAULTS FOUND ON THE SYSTEMS				
	The following are the faults that was picked up per system as error messages on the indoor and outdoor controllers. The data from a site inspection done in 2022 and 2024 are included. The information provided needs to be verified by each tenderer and any additional work found should add if deemed necessary by the specialist contractor. The quotation provided shall include everything to reinstate and get the total installation completely functional and in good working order.				
2.1	Fresh Air handling unit (AHU-COMP)				
	Unit needs to be cleaned and filters replaced as already mentioned.				
	Fresh air unit Model: AM300KXVAGH				
	E364 error 2022 site inspection, DC Peak Compressor stop.				
	E464 error 2024 site inspection, Error due to over-current of inverter compressor 2.				
	Both compressors are faulty				
2.2	Third Floor System (SYS-04-1)				
	3rd floor system MODEL: AMX220FXVAGR (MASTER), AM120FXVAGR (SLAVE)				
	E464 error site inspection 2022, Error due to over-current of inverter compressor 1				
	E439 error site inspection 2024, Error due to refrigerant leakage.				
	Both compressors are faulty. All refrigerant leaked out.				
2.3	Second Floor System (SYS-03-01)				
	2nd floor system MODEL: AM220FXVAGR (MASTER), AM140FXVAGR (SLAVE)				
	E122 error site inspection 2022 and 2024, Error on EVA IN sensor of indoor unit (short or Open).				
	E361 error site inspection 2024, 2 CT1 Inverter compressor start failure, or low current.				
	Both compressors are faulty and PC boards are faulty.				

2.4	First Floor System (SYS-02-01)				
	1st floor system MODEL: AM120FXVAGR (MASTER), AM120FXVAGR (SLAVE)				
	Compressor and inverter board burned out picked up during site inspection 2022				
	E203 ERROR SITE INSPECTION 2024, Outdoor Unit Communication Error Between Main-Sub.				
	E214 ERROR SITE INSPECTION 2024, MCU address not matched with outdoor unit address.				
	E212 ERROR SITE INSPECTION 2024, Indoor unit connected with confluence kit setting address was overlapped more than 3 times.				
	Both compressors are faulty and PC boards are faulty				
2.5	Ground Floor System (SYS-01-01)				
	Ground floor MODEL: AM160FXVAGR				
	E439 ERROR SITE INSPECTION 2022, Error due to refrigerant leakage.				
	E465 ERROR SITE INSPECTION 2024, Compressor Overload stop (over 30A).				
	Compressor is faulty and PC board are faulty. All refrigerant leaked out.				
2.6	Toilet Extraction fan (FAN2 RL-02)				
	Fan motor tested OK but stop start and overload faulty and need to be replaced				
	Replaced diffusers in toilet where ceiling has fallen out after ceiling replacement.				
2.7	Servicing the system				
	In addition to the repairs related to the faults indicated above, the full system needs to be serviced and filters replaced. Refer to drawing for all the equipment involved.				
Item	Description	Unit	Qty	Rate	Amount
3	SYSTEMS REPAIR ITEM SCHEDULE			Supply & Install	
	The following is a schedule if items derived from the fault conditions that could be required to repair and restore each system. Contractor shall add to this if required.				
3.1	AHU - COND - Fresh air - model -AM300KXVAGH				
3,1,1	Supply and Install new Compressor : DS4GJ5080FVA	Each	2		
3,1,2	Supply and Install new Inverter PCB: DB92-03337A	Each	2		
3,1,3	Supply and Install new Shell Drier 969T, 2x48, 1 1/8"	Each	1		
3,1,4	Supply and Install new Drier Core W-48 FOR BURNOUT	Each	2		
3,1,5	Supply and Install new Drier Core D-48 MOISTUR/ACID	Each	2		
3,1,6	Supply and Install new Ball Valve Henry 1 1/8"	Each	3		
3,1,7	Supply and Install new elbows	Each	6		
3,1,8	Supply and Install new 1 1/8" pipe and flex	m	1		
3,1,9	Recovery of the Refrigerant in the system	Cylinders	5		
3,1,10	Charge of nitrogen to spot gas leaks Pressurise system to 41 Bar and leave for 48 hours	Bottles	2		
3,1,11	Vacuum System to 500 Micron (Vacuum to be held for 1 hours)	Hrs	3		
3,1,12	Vacuum pump Oil	litre	1		
3,1,13	New Refrigerant per kg R410 A	kg	24		
3,1,14	Sundries	Sum	1		
3,1,15	Supply and Install new Filters 495 x 495 x 48mm	Each	9		
3,1,16	Labour to commission, test and compile commissioning report	Hrs	8		

3.2	3RD floor - SYS-04-01 - model - AM220FXVAGR				
3,2,1	Supply and Install new Compressor : DS-GB066FAVBSG	Each	2		
3,2,2	Supply and Install new Inverter PCB: DB92-03526A	Each	2		
3,2,3	Supply and Install new Shell Drier 969T, 2x48, 1 1/8"	Each	1		
3,2,4	Supply and Install new Drier Core W-48 FOR BURNOUT	Each	2		
3,2,5	Supply and Install new Drier Core D-48 MOISTUR/ACID	Each	2		
3,2,6	Supply and Install new Ball Valve Henry 1 1/8"	Each	3		
3,2,7	Supply and Install new elbows	Each	6		
3,2,8	Supply and Install new 1 1/8" pipe and flex	m	1		
3,2,9	Recovery of the Refrigerant in the system	Cylinders	5		
3,2,10	Charge of nitrogen to spot gas leaks Pressurise system to 41 Bar and leave for 48 hours	Bottles	2		
3,2,11	Vacuum System to 500 Micron (Vacuum to be held for 1 hours)	Hrs	3		
3,2,12	Vacuum pump Oil	litre	1		
3,2,13	New Refrigerant per kg R410 A	kg	38		
3,2,14	Sundries	Sum	1		
3,2,15	Labour to commission, test and compile commissioning report	Hrs	8		
3.3	2nd floor - SYS-03-01 - model - AM220FXVAGR				
3,3,1	Supply and Install new Compressor : DS-GB066FAVBSG	Each	2		
3,3,2	Supply and Install new Inverter PCB: DB92-03526A	Each	2		
3,3,3	Supply and Install new Sensor EVA IN/OUT: DB95-05011A	Each	1		
3,3,4	Supply and Install new Shell Drier 969T, 2x48, 1 1/8"	Each	1		
3,3,5	Supply and Install new Drier Core W-48 FOR BURNOUT	Each	2		
3,3,6	Supply and Install new Drier Core D-48 MOISTUR/ACID	Each	2		
3,3,7	Supply and Install new Ball Valve Henry 1 1/8"	Each	3		
3,3,8	Supply and Install new elbows	Each	6		
3,3,9	Supply and Install new 1 1/8" pipe and flex	m	1		
3,3,10	Recovery of the Refrigerant in the system	Cylinders	5		
3,3,11	Charge of nitrogen to spot gas leaks Pressurise system to 41 Bar and leave for 48 hours	Bottles	2		
3,3,12	Vacuum System to 500 Micron (Vacuum to be held for 1 hours)	Hrs	3		
3,3,13	Vacuum pump Oil	litre	1		
3,3,14	New Refrigerant per kg R410 A	kg	35		
3,3,15	Sundries	Sum	1		
3,3,16	Labour to commission, test and compile commissioning report	Hrs	8		
3.4	1ST floor - SYS-02-01 - model - AM120FXVAGR				
3,3,1	Supply and Install new Compressor : DS-GB066FAVBSG	Each	2		
3,3,2	Supply and Install new Inverter PCB: DB92-03526A	Each	2		
3,3,3	Supply and Install new Main PCB DB92-02793A	Each	1		
3,3,4	Supply and Install new Comms PCB: DB92-02793A	Each	1		
3,3,5	Supply and Install new Eeprom: DB92-04020A	Each	1		
3,3,6	Supply and Install new Shell Drier 969T, 2x48, 1 1/8"	Each	1		
3,3,7	Supply and Install new Drier Core W-48 FOR BURNOUT	Each	2		
3,3,8	Supply and Install new Drier Core D-48 MOISTUR/ACID	Each	2		
3,3,9	Supply and Install new Ball Valve Henry 1 1/8"	Each	3		
3,3,10	Supply and Install new elbows	Each	6		
3,3,11	Supply and Install new 1 1/8" pipe and flex	m	1		
3,3,12	Recovery of the Refrigerant in the system	Cylinders	5		
3,3,13	Charge of nitrogen to spot gas leaks Pressurise system to 41 Bar and leave for 48 hours	Bottles	2		
3,3,14	Vacuum System to 500 Micron (Vacuum to be held for 1 hours)	Hrs	3		
3,3,15	Vacuum pump Oil	litre	1		
3,3,16	New Refrigerant per kg R410 A	kg	30		
3,3,17	Sundries	Sum	1		
3,3,18	Labour to commission, test and compile commissioning report	Hrs	8		

3.4	Ground floor - SYS-01-01 - model - AM160FXVAGR				
3,4,1	Supply and Install new Compressor : DS-GB066FAVBSG	Each	2		
3,4,2	Supply and Install new Inverter PCB: DB92-03526A	Each	2		
3,4,3	Supply and Install new Shell Drier 969T, 2x48, 1 1/8"	Each	1		
3,4,4	Supply and Install new Drier Core W-48 FOR BURNOUT	Each	2		
3,4,5	Supply and Install new Drier Core D-48 MOISTUR/ACID	Each	2		
3,4,6	Supply and Install new Ball Valve Henry 1 1/8"	Each	3		
3,4,7	Supply and Install new elbows	Each	6		
3,4,8	Supply and Install new 1 1/8" pipe and flex	m	1		
3,4,9	Recovery of the Refrigerant in the system	Cylinders	5		
3,4,10	Charge of nitrogen to spot gas leaks Pressurise system to 41 Bar and leave for 48 hours	Bottles	2		
3,4,11	Vacuum System to 500 Micron (Vacuum to be held for 1 hours)	Hrs	3		
3,4,12	Vacuum pump Oil	litre	1		
3,4,13	New Refrigerant per kg R410 A	kg	25		
3,4,14	Sundries	Sum	1		
3,4,15	Labour to commission, test and compile commissioning report	Hrs	8		
3.5	Toilet Extraction fan (FAN2 RL-02)				
3,5,1	Supply and Install new Fan stop start with overload	Each	1		
3,5,2	Labour to commission, test and compile commissioning report	Hrs	1		
3.6	Travelling (5 trips from JHB to Vanderbijlpark) adjust as required	km	650		
3.7	Major Service of all equipment				
	Major Service of all equipment in accordance with Samsung Specifications. Contractor to provide Samsung service specification all equipment serviced. Quantities provided shall be checked and verified with drawings provided.				
3,7,1	Servicing of Ceiling cassette split units	Each	62		
3,7,2	Servicing of Hideaway ducted split unit	Each	3		
3,7,3	Servicing of Package units	Each	1		
3,7,4	Servicing of ventilation systems (large)	Each	2		
3,7,5	Servicing of ventilation systems (small)	Each	1		
3,7,6	General consumables / spares	Each	1		
3,7,7	BMS System set up reset and reinstatement	Sum	1		
3,7,8	Travelling (1 trips from JHB to Vanderbijlpark) adjust as required	km	130		
3.8	Contingency amount (Provisional Amount)				R 25 000.00
3.9	Additional items				
	Any other item deemed necessary but not included (please specify)				
3,9,1					
3,9,2					
3,9,3					
	Carried to Final Summary				

**VAAL UNIVERSITY OF TECHNOLOGY
VANDERBIJLPARK CAMPUS
REMEDIAL WORKS TO THE PS BUILDING**

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