

Item No		Quantity	Amount
	<p><b><u>BILL NO 1</u></b></p> <p><b><u>PRELIMINARIES</u></b></p> <p><b><u>BUILDING AGREEMENT AND PRELIMINARIES</u></b></p> <p>i) The <b>agreement</b> is to be the General Conditions of Contract for works of, and other contract documents that together form the contract between the employer and contractor.</p> <p>ii) The <b>preliminaries</b> are to be Construction and Management requirements for works contract - Part 1: General Engineering and construction works (SANS 1921-1:2004 Edition 1 prepared by standards South Africa and shall be deemed to be incorporated herein.</p> <p>iii) Tenderes are referred to the above mentioned documents for the full intent and meaning of each clause thereof (hereinafter referred to by heading and clause numberonly) for which such allowance must be made as may be considered necessary.</p> <p>iv) Where standard clauses or alternatives are not entirely applicable to this contract such modification, corrections or suppliments as will apply are given under each relavant clause heading.</p> <p>v) Where any item is not relevant to this specific contract such item is marked N/A (signifying "not applicable")</p> <p>vi) If Alternative A as set out in clause B10.3 hereinafter is to be used for the adjustment of the preliminaries each item price is to be allocated to one or more of the three categories, where "F" denotes a fixed amount (amount not to be varied), "V" denotes an amount variable in proportion to value and "T" denotes an amount in proportion to time.</p> <p><b><u>PREAMBLES FOR TRADES</u></b></p> <p>The Model Preambles for Trades (1999 edition) as 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 Model Preambles will be entertained</p> <p>Supplementary preambles are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles shall take precedence over the provisions of the said Model Preambles</p> <p>The contractor's prices for all items throughout these bills of quantities must take account of and include for all of the obligations, requirements and specifications given in the said Model Preambles and in any supplementary preambles</p>		
	<b>Carried Forward</b>		R
	<p>Section No. 1 Preliminaries Bill No. 1 Preliminaries</p>		

	<b>Brought Forward</b>	R	
	<b><u>PRICING OF PRELIMINARIES</u></b>		
	<b><u>SECTION A - PRINCIPAL BUILDING AGREEMENT</u></b>		
	<b><u>Definitions (A1)</u></b>		
1	Clause 1.0 - Definitions and interpretation F:..... V:..... T:.....	Item	
	<b><u>Objective (A2)</u></b>		
2	Clause 2.0 - Offer acceptance and performance obligations F:..... V:..... T:.....	Item	
	<b><u>Preparations (A3- A14)</u></b>		
3	Clause 3.0 - Documents F:..... V:..... T:.....	Item	
4	Clause 4.0 - Design responsibility F:..... V:..... T:.....	Item	
5	Clause 5.0 - Employer's agents F:..... V:..... T:.....	Item	
6	Clause 6.0 - Contractor's site representative F:..... V:..... T:.....	Item	
7	Clause 7.0 - Compliance with laws and regulations F:..... V:..... T:.....	Item	
8	Clause 8.0 - Works risk F:..... V:..... T:.....	Item	
9	Clause 9.0 - Indemnities F:..... V:..... T:.....	Item	
10	Clause 10.0 - General insurance F:..... V:..... T:.....	Item	
11	Clause 11.0 - Special insurances F:..... V:..... T:.....	Item	
12	Clause 12.0 - Effecting insurances F:..... V:..... T:.....	Item	
	<b>Carried Forward</b>	R	
	Section No. 1 Preliminaries Bill No. 1 Preliminaries		

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		<b>Brought Forward</b>	R
13	<p>Clause 13.0 - Assignment                      F:..... V:..... T:.....</p>		Item
14	<p>Clause 14.0 - Security F:..... V:.....                      T:.....</p>		Item
<b><u>Execution</u></b>			
15	<p>Clause 15.0 - Preparation for and execution of the works F:.....                      V:..... T:.....</p>		Item
16	<p>Clause 16.0 - Site and access</p> <p><u>User note</u></p> <p><i>Insert details against this clause for any of the following where specifically required</i></p> <p>    Clause 16.7 - <i>Known services</i></p> <p>    Clause 16.8 - <i>Protection of trees</i></p> <p>F:..... V:..... T:.....</p>		Item
17	<p>Clause 17.0 - Contract instructions F:..... V:.....                      T:.....</p>		Item
18	<p>Clause 18.0 - Setting out of the works The contractor shall notify the principal agent if any encroachments of adjoining foundations, buildings, structures, pavements, boundaries, etc. exist in order that the necessary arrangements may be made for the rectification of any such encroachments.F: .....</p> <p>V:..... T:.....</p>		Item
19	<p>Clause 19.0 - Temporary works and plant</p> <p><u>User note?</u></p> <p><i>Insert details against this clause for any of the following where specifically required</i></p> <p>    Subclause 19.1.1 - <i>Enclosure of the works</i></p> <p>    Subclause 19.1.2 - <i>Office accommodation</i></p> <p>    Clause 19.2 - <i>Notice boards</i></p> <p>F:..... V:..... T:.....</p>		Item
20	<p>Clause 20.0 - Nominated subcontractors F:.....                      V:..... T:.....</p>		Item
		<b>Carried Forward</b>	R
<p>Section No. 1                      Preliminaries                      Bill No. 1                      Preliminaries</p>			

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		<b>Brought Forward</b>	<b>R</b>
21	Clause 21.0 - Selected subcontractors F:..... V:..... T:.....		Item
22	Clause 22.0 - Employer's direct contractorsF:..... V:..... T:.....		Item
23	Clause 23.0 - Contractor's domestic subcontractorsF:..... V:..... T:.....		Item
	<b><u>Completion</u></b>		
24	Clause 24.0 - Practical completion		
	<u>User note</u>		
	<i>Insert the following where tenant installation work is to be executed by others</i>		
	The contractor shall not receive any mark-up for overheads and profit on any omission of tenant installation work or tenant installation work by others. Claims of loss of profit shall not be entertained		
	F:..... V:..... T:.....		Item
25	Clause 25.0 - Works completion F:..... V:..... T:.....		Item
26	Clause 26.0 - Final completion F:..... V:..... T:.....		Item
27	Clause 27.0 - Latent defects liability period F:..... V:..... T:.....		Item
28	Clause 28.0 - Sectional completion F:..... V:..... T:.....		Item
29	Clause 29.0 - Revision of date for practical completion The removal and replacement of materials and/or workmanship which do not conform to specification or drawing shall not constitute grounds for the extension of the construction period nor for the adjustment of the contract value (Clause 29.3)F:..... V:..... T:.....		Item
30	Clause 30.0 - Penalty for late or non-completion F:..... V:..... T:.....		Item
		<b>Carried Forward</b>	<b>R</b>
	Section No. 1 Preliminaries Bill No. 1 Preliminaries		

	<b>Brought Forward</b>	R	
	<b><u>Payment</u></b>		
31	<p>Clause 31.0 - Interim payment</p> <p>The inclusion of materials and goods stored off site in the amount authorised for payment in terms of clause 31.4 shall be at the sole discretion of the principal agent and such inclusion shall only be considered upon the provision, by the contractor, of an approved guarantee issued by a registered commercial bank. Clause 31.6.5 is therefore not applicable?</p> <p>Materials and goods stored off site shall not be included in the amount authorised for payment?</p> <p>F:..... V:..... T:.....</p>	Item	
32	<p>Clause 32.0 - Adjustment to the contract value</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.</p> <p>Where prices are submitted by the contractor or n/s subcontractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of the contract 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 final payment certificate, it shall be in writing?</p> <p>F:..... V:..... T:.....</p>	Item	
33	<p>Clause 33.0 - Recovery of expense and loss F:.....</p> <p>V:..... T:.....</p>	Item	
34	<p>Clause 34.0 - Final account and final payment F:.....</p> <p>V:..... T:.....</p>	Item	
35	<p>Clause 35.0 - Payment to other parties F:..... V:.....</p> <p>T:.....</p>	Item	
	<b><u>Cancellation (A36 - A39)</u></b>		
36	<p>Clause 36.0 - Termination by employer - contractor's default</p> <p>F:..... V:..... T:.....</p>	Item	
37	<p>Clause 37.0 - Termination by employer - loss and damage</p> <p>F:..... V:..... T:.....</p>	Item	
	<b>Carried Forward</b>	R	
	<p>Section No. 1 Preliminaries Bill No. 1 Preliminaries</p>		

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

	<b>Brought Forward</b>	R	
38	<p>Clause 38.0 - Termination by contractor - employer's default</p> <p>F:..... V:..... T:.....</p>	Item	
39	<p>Clause 39.0 - Termination - cessation of the works</p> <p>F:..... V:..... T:.....</p>	Item	
	<b><u>Dispute</u></b>		
40	<p>Clause 40.0 - Settlement of disputes F:..... V:..... T:.....</p>	Item	
	<b><u>Contract agreements</u></b>		
41	<p>Clause 41.0 - The schedule : Pre- tender provisions</p> <p>Information necessary for completion of those clauses contained in the schedule which are necessary for tender purpose is given hereunder.</p> <p><u>User note</u></p> <p><i>All information for this clause requires consultation with the contractor. The principal agent should not pre-select any of the alternatives available to the contractor</i></p>	Item	
42	<p>Clause 42.0 - Contractual agreement</p> <p>The required information of the contracting parties and the amount of the accepted contract sum shall be inserted in the contractual agreement for signature of the agreement by the contracting parties</p>	Item	
	<b>Carried Forward</b>	R	
	<p>Section No. 1 Preliminaries Bill No. 1 Preliminaries</p>		

		Brought Forward	R
<b><u>SECTION B - PRELIMINARIES</u></b>			
<b><u>Definitions and interpretation</u></b>			
43	Clause 1.0 - Definitions and interpretation F:..... V:..... T:.....		Item
<b><u>Documents</u></b>			
44	Clause 2.1 - Checking of documents F:..... V:..... T:.....		Item
45	Clause 2.2 - Provisional bills of quantities	N/A	
	F:..... V:..... T:.....		Item
46	Clause 2.3 - Availability of construction documentation  The budgetary allowances and ?selected? (nominated?) subcontract amounts allocated for subsequent trades included in this document will be separately procured, based on multiple procurement of ?selected? (nominated?) subcontractors during the construction period?  F:..... V:..... T:.....		Item
<b><u>Previous work and adjoining properties</u></b>			
47	Clause 3.1 - Previous work - dimensional accuracy F:..... V:..... T:.....		Item
48	Clause 3.2 - Previous work - defects F:..... V:..... T:.....		Item
49	Clause 3.3 - Inspection of adjoining properties F:..... V:..... T:.....		Item
<b><u>Management of contract</u></b>			
50	Management of the works  F:..... V:..... T:.....		Item
51	Progress meetings  F:..... V:..... T:.....		Item
		<b>Carried Forward</b>	R
Section No. 1 Preliminaries Bill No. 1 Preliminaries			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		<b>Brought Forward</b>	<b>R</b>
52	Technical meetings F:..... V:..... T:.....		Item
<b><u>Samples, shop drawings and manufacturer's instructions</u></b>			
53	Clause 4.1 - Samples of materials F:..... V:..... T:.....		Item
54	Clause 4.2 - Workmanship samples F:..... V:..... T:.....		Item
55	Clause 4.3 - Shop drawings F:..... V:..... T:.....		Item
56	Clause 4.4 - Compliance with manufacturer's instructionsF:..... V:..... T:.....		Item
<b><u>Deposits and fees</u></b>			
57	Clause 5.1 - Deposits and fees F:..... V:..... T:.....		Item
<b><u>Temporary services</u></b>			
58	Clause 6.1 - WaterF:..... V:..... T:.....		Item
59	Clause 6.2 - ElectricityF:..... V:..... T:.....		Item
60	Clause 6.3 - Telecommunication facilitiesF:..... V:..... T:.....		Item
61	Clause 6.4 - Ablution facilitiesF:..... V:..... T:.....		Item
<b><u>Prime cost amounts</u></b>			
62	Clause 7.1 - Responsibility for prime cost amountsF:..... V:..... T:.....		Item
		<b>Carried Forward</b>	<b>R</b>
Section No. 1 Preliminaries Bill No. 1 Preliminaries			



		Brought Forward	R
	<b><u>Special attendance on n/s subcontractors</u></b>		
63	<p>Clause 8.1 - Special attendance</p> <p><u>User note?</u></p> <p><i>General attendance is defined in the n/s subcontract agreement</i></p> <p>Insert details against this clause or where provisional sums are stated for any special attendance where specifically required for each n/s subcontractor separately</p> <p>F:..... V:..... T:.....</p>		Item
	<b><u>General</u></b>		
64	<p>Clause 9.1 - Protection of the worksF:..... V:.....</p> <p>T:.....</p>		Item
65	<p>Clause 9.2 - Protection/isolation of existing/sectionally occupied works</p> <p>F:..... V:..... T:.....</p>		Item
66	<p>Clause 9.3 - Security of the worksF:..... V:.....</p> <p>T:.....</p>		Item
67	<p>Clause 9.4 - Notice before covering work F:.....</p> <p>V:..... T:.....</p>		Item
68	<p>Clause 9.5 - Disturbance F:..... V:.....</p> <p>T:.....</p>		Item
69	<p>Clause 9.6 - Environmental disturbance</p> <p>F:..... V:..... T: .....</p>		Item
70	<p>Clause 9.7 - Works cleaning and clearingF:.....</p> <p>V:..... T:.....</p>		Item
71	<p>Clause 9.8 - VerminF:..... V:..... T:.....</p>		Item
72	<p>Clause 9.9 - Overhand workF:..... V:.....</p> <p>T:.....</p>		Item
73	<p><b>Clause 9.10 Enclosure of works</b></p> <p>F: ..... V: ..... T: .....</p>		Item
		<b>Carried Forward</b>	R
	<p>Section No. 1 Preliminaries Bill No. 1 Preliminaries</p>		

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		<b>Brought Forward</b>	<b>R</b>
	<p>The contractor shall provide, erect, alter as necessary, maintain, remove and make good on completion of the works suitable hoardings, complete with gables, fans, safety screens, barriers, guard railing, access gates, covered gangways, steel sections at crane lifts, splayed corners, returned ends, etc as indicated on the drawings and as necessary for the enclosure of the works and the protection of the public, all to the satisfaction of the Representative/Agent and the Local Authority</p>		
74	<p><b>Clause 9.11 Sheds</b></p> <p>F: ..... V: ..... T: .....</p> <p>The contractor shall provide, maintain, and remove on completion of the works temporary sheds for the proper storage of materials</p>		Item
75	<p><b>Clause 9.12 Office for the representative / agent</b></p> <p>F: ..... V: ..... T: .....</p> <p>The contractor shall provide, maintain and remove on completion of the work an office for the exclusive use of the Representative/Agent, minimum size 4 x 3 x 3m high internally, suitably insulated and ventilated, provided with electric lighting and fitted with boarded floor, desk, chair, drawing stool, drawing board, and lock-up drawers for drawings. The office shall be kept clean and fit for use at all times</p>		Item
76	<p><b>Clause 9.13 Plant and Scaffolding</b></p> <p>F: ..... V: ..... T: .....</p> <p>The contractor shall provide, maintain and remove if no longer required all plant and scaffolding necessary for the execution of the works Scaffolding will not be permitted to be erected from buildings on adjacent premises</p>		Item
77	<p><b>Clause 9.14 - Notice Board</b></p> <p>F: ..... V: ..... T: .....</p>		Item
		<b>Carried Forward</b>	<b>R</b>
	<p>Section No. 1 Preliminaries Bill No. 1 Preliminaries</p>		

<p align="right"><b>Brought Forward</b></p> <p>The contractor shall provide, erect where directed, maintain and remove on completion of the works a notice board size 3 x 3m, constructed of suitable boarding with flat smooth surface and with edging bead 19mm thick all round outer edges and projecting 12mm from face of boarding and rounded on front edge</p> <p>The board shall be securely fixed to hoarding, where hoarding is provided, or fixed to and including a suitable supporting structure of timber or tubular posts and braces. The board is to be painted ivory white and the bead and 12mm wide dividing lines deep blue. All wording shall be inscribed in deep blue painted sans serif lettering</p> <p>Sub-contractor's individual boards will be allowed on the site subject to the written approval of the Representative/Agent</p> <p><b><u>Schedule of variables</u></b></p> <p>Information necessary for elections and completion of those clauses contained in the schedule which are necessary for tender purposes is given hereunder. Where no information is given it shall mean that no specific requirements are expected or that the clause is not relevant to this specific contract</p> <p>10.1 - Provisional bills of quantities [clause 2.2] The quantities are provisional</p> <p>10.2 - Availability of construction documentation [clause 2.3] Construction documentation is complete</p> <p>10.3 - Previous work - dimensional accuracy [clause 3.1]</p> <p>10.4 - Previous work - defects [clause 3.2]</p> <p>10.5 - Inspection of adjoining properties [clause 3.3]</p> <p>10.6 - Water [clause 7.2]</p> <p>Option A (by contractor)</p> <p>Option B (by employer - free of charge)</p> <p>Option C (by employer - metered)</p> <p align="right"><b>Carried Forward</b></p> <p>Section No. 1 Preliminaries Bill No. 1 Preliminaries</p>	<p align="center">R</p>	
	R	

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

	<b>Brought Forward</b>	<b>R</b>
10.7 - Electricity [clause 7.3]		
Option A (by contractor)	<i>yes</i>	
Option B (by employer - free of charge)	<i>no</i>	
Option C (by employer - metered)	<i>no</i>	
10.8 - Telecommunications [clause 7.4]		
Telephone	<i>yes</i>	
Facsimile	<i>yes</i>	
E-mail	<i>yes</i>	
10.9 - Ablution facilities [clause 7.5]		
Option A (by contractor)	<i>yes</i>	
Option B (by employer)	<i>no</i>	
10.10 - Protection of the works [clause 9.1]		
10.11 - Protection/isolation of existing/sectionally occupied works [clause 9.2] Protection/isolation is required	<i>Yes</i>	
10.12 - Disturbance [clause 9.5]		
10.13 - Environmental disturbance [clause 9.6]		
	<b>Carried Forward</b>	<b>R</b>
Section No. 1 Preliminaries Bill No. 1 Preliminaries		

	<b>Brought Forward</b>	R	
	<b><u>SECTION C - SPECIFIC PRELIMINARIES</u></b>		
	<u>User note</u>		
	<i>Selected examples of typical clauses are provided to indicate ways of describing such clauses. Users must delete, adapt or add to these examples to suit their particular circumstances</i>		
78	<b>Site instructions</b>		
	Instructions issued on site are to be recorded in triplicate in a site instruction book which is to be maintained on site by the contractor		
	F:..... V:..... T:.....	Item	
79	<b>Warranties for material and workmanship</b>		
	Where warranties for materials and/or workmanship are called for, the contractor shall obtain a written warranty, addressed to the employer, from the firm supplying the materials and/or doing the work and shall deliver same to the principal agent on the certified completion of the contract. The warranty shall state that workmanship, materials and installation are warranted for a specified period from the date of final completion and that any defects that may arise during the specified period shall be made good at the expense of the firm supplying the materials and/or doing the work, upon written notice to do so. The warranty will not be enforced if the work is damaged by defects in the construction of the building in which case the responsibility for replacement shall rest entirely with the contractor		
	F:.....V:.....T:.....	Item	
80	<b>Co-operation of contractor for cost management</b>		
	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 final building cost does not exceed the budget. The principal agent undertakes to make available to the contractor all budgetary allowances and cost assessments/reports to enable the proper procedure to be implemented and the contractor shall attend all cost plan review and cost management meetings. The contractor undertakes to extend these procedures, as necessary, to all subcontractors		
	F:.....V:.....T:.....	Item	
	<b>Carried Forward</b>	R	
	Section No. 1 Preliminaries Bill No. 1 Preliminaries		

	<b>Brought Forward</b>	R	
81	<p><b>Propping of floors below</b></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	
82	<p><b>Testing of windows for watertightness</b></p> <p>Each window shall be tested for watertightness with water sprayed on using adequate pressure. If in the opinion of the principal agent, the pressure proves to be inadequate, then the pressure shall be boosted by means of compressed air or other approved means</p> <p>F:..... V:..... T:.....</p>	Item	
83	<p><b>Testing of flat roof waterproofing for watertightness</b></p> <p>Flat roof waterproof areas shall be prepared with small sand dykes around them of a size and enclosing an area approved by the principal agent, flooded with water and kept "ponded" for at least 36 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	
	<b><u>LABOUR DESK</u></b>		
84	<p>The contractor shall establish a labour desk on site with a dedicated office of maximum 9m2 with and including a desk 2 chairs and electricity. From the labour desk (CLO), the contractor will appoint a dedicated community liaison officer at a monthly gross remuneration of R3,000.00, subject to all statutory deductions. The community liaison officer will be employed by and will report to the contractor, who will in turn forward such reports to the Principal Agent.</p> <p>F:..... V:..... T:.....</p>	Item	
	<b><u>HEALTH AND SAFETY ACT (Act 85 of 1993)</u></b>		
85	<p>Compliance with the Occupational Health and safety Act (Act 85 of 1993) and all relevant and applicable regulations, especially the Construction Health &amp; Safety Act (Act 85 of 1993) (as amended) for the duration of the contract.</p>	Item	
86	<p>Provision of OH &amp; S plan prior to commencement of works as well as a full consolidated copy of such plan at the completion of construction work inclusive of a record of all drawings, designs, copies of statutory appointments, material used and other similar information concerning completed contract</p>	Item	
	<b>Carried Forward</b>	R	
	<p>Section No. 1 Preliminaries Bill No. 1 Preliminaries</p>		

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

	<b>Brought Forward</b>	<b>R</b>
87	Implementantion of Approved OHS plan for duration of contract, including daily/ weekly inspectios, monthly meeting, required audits, consolidated health and safety file, etc.	Item
88	Registration with compensation fund or approved / licenced compensation insurer.	Item
89	Fulltime competent employee of the contractor as safety construction supervisor and assistant safety construction supervisors for duration of contract.	Item
90	Health and safety training and induction requirements of all persons entering the site.	Item
	<b><u>HIV AND AIDS POLICY</u></b>	
91	Observation of all legislation, policies and by-laws regulating the "AIDS" endemic and "HIV" prevention, treatment and observation.	Item
	<b><u>SUMMARY OF CATEGORIES</u></b>	
	Category : Fixed R.....	
	Category : Value R.....	
	Category : Time R.....	
	<b>Carried to Final Summary</b>	R
Section No. 1 Preliminaries Bill No. 1 Preliminaries		

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.2</u></b></p> <p><b><u>BILL NO. 1</u></b></p> <p><b><u>EARTHWORKS (PROVISIONAL)</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Nature of ground</u></b></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><b><u>Carting away of excavated material</u></b></p> <p>Description 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> <p><b><u>EARTHWORKS</u></b></p> <p><b><u>SITE CLEARANCE ETC</u></b></p> <p><b><u>Site clearance</u></b></p>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	1 052	
2	Rip and scarify ground level to a depth of 150mm and consolidate to 90% mod. AASHTO density (minimum CBR 3)	m2	1 052	
	<p><b><u>REMOVAL OF TREES ETC</u></b></p>			
	<b>Carried Forward</b>			R
	<p>Section No. 2 Main office building Bill No. 1 Earthworks</p>			



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<b><u>Taking out and removing, grubbing up roots and filling in holes</u></b>			
3	Tree stump exceeding 200mm and not exceeding 500mm girth	No	4
4	Tree stump exceeding 500mm and not exceeding 1000mm girth	No	3
<b><u>EXCAVATION, FILLING, ETC</u></b>			
<b><u>Excavation in earth not exceeding 2m deep</u></b>			
5	Trenches	m3	149
6	Holes	m3	82
<b><u>Extra over trench and hole excavations in earth for excavation in</u></b>			
7	Soft rock	m3	29
8	Hard rock	m3	68
<b><u>Extra over all excavations for carting away</u></b>			
9	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	106
<b><u>Risk of collapse of excavations</u></b>			
10	Sides of trench and hole excavations not exceeding 1,5m deep	m2	1 206
<b><u>Keeping excavations free of water</u></b>			
11	Keeping excavations free of all water other than subterranean water		Item
<b><u>Earth filling obtained from the excavations and compacted to 93% Mod AASHTO density</u></b>			
12	Under floors, steps, pavings, etc	m3	65
13	Backfilling to trenches, holes, etc	m3	90
<b>Carried Forward</b>			R
Section No. 2 Main office building Bill No. 1 Earthworks			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<b><u>Earth filling supplied by the contractor compacted to 93% Mod AASHTO density.</u></b>			
14	Under floors, steps paving, etc	m3	130
<b><u>Earth filling of G5 material supplied by the contractor compacted to 93% Mod AASHTO density.</u></b>			
15	Under floors, steps paving, etc	m3	316
<b><u>Coarse river sand filling supplied by the contractor</u></b>			
16	Under floors etc	m3	65
<b><u>Compaction of surfaces</u></b>			
17	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	648
<b><u>Prescribed density tests on filling</u></b>			
18	"Modified AASHTO Density" test	No	15
<b><u>SOIL POISONING</u></b>			
<b><u>Soil insecticide</u></b>			
19	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	648
20	To bottoms and sides of trenches etc	m2	637
<b>Carried Forward to Summary of Section No. 2</b>			R
Section No. 2			
Main office building			
Bill No. 1			
Earthworks			

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.2</u></b></p> <p><b><u>BILL NO. 2</u></b></p> <p><b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Model Preambles For Trades"</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><u>Cost of tests</u></p> <p>The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the principal agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the principal agent. (Test cubes are measured separately)</p> <p><u>Breeze concrete</u></p> <p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated</p> <p><u>Lightweight concrete</u></p> <p>Lightweight concrete shall have a density of 600kg/m<sup>3</sup> for the top 50mm and 400kg/m<sup>3</sup> for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm</p>			
	<p><b>Carried Forward</b></p>			R
	<p>Section No. 2 Main office building Bill No. 2 Concrete, Formwork &amp; Reinforcement</p>			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>				R
<u>Formwork</u>				
<p>Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use</p> <p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself</p> <p>Formwork to soffits of solid slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described</p> <p>Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described</p> <p>Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"</p>				
<b><u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>				
<u>15MPa/19mm concrete</u>				
1	Surface blinding under footings and bases	m3	20	
2	Surface blinding under surface beds	m3	124	
<b><u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>				
<b>Carried Forward</b>				R
<p>Section No. 2 Main office building Bill No. 2 Concrete, Formwork &amp; Reinforcement</p>				

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>				R
	<u>25MPa/19mm concrete</u>			
3	Bases	m3	35	
4	Strip footings	m3	104	
5	Surface beds cast in panels on waterproofing	m3	105	
	<u>30MPa/19mm concrete</u>			
6	Stub Columns in foundations (Provisional)	m3	0.5	
<b><u>REINFORCED CONCRETE CAST ON/IN FORMWORK</u></b>				
	<u>25MPa/19mm concrete</u>			
7	Stairs and ramps	m3	9	
8	Slabs including beams and inverted beams	m3	358	
	<u>30MPa/19mm concrete</u>			
9	Columns	m3	23	
<b><u>TEST CUBES</u></b>				
10	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	25	
<b><u>CONCRETE SUNDRIES</u></b>				
	<u>Cutting off and removing excess length of precast concrete pile as necessary including stripping back for a height not exceeding ?mm to expose reinforcement, trimming to defined level and bending reinforcement as necessary for casting into pile cap</u>			
11	300mm Joint	No	10	
	<u>Finishing top surfaces of concrete smooth with a power float</u>			
12	Surface beds, slabs, etc	m2	8	
<b>Carried Forward</b>				R
Section No. 2 Main office building Bill No. 2 Concrete, Formwork & Reinforcement				

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
13	Surface beds, slabs, etc to falls	m2	55
	<u>Finishing top surfaces of concrete smooth with a wood float</u>		
14	Surface beds, slabs, etc	m2	599
	<b><u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u></b>		
	<u>Rough formwork to sides</u>		
15	Bases (Provisional)	m2	86
	<b><u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u></b>		
	<u>Smooth formwork to sides</u>		
16	Rectangular and square columns	m2	175
	<u>Smooth formwork to soffits</u>		
17	Slabs propped up exceeding 1.5m and not exceeding 3.5m high	m2	61
18	Slabs propped up exceeding 3.5m and not exceeding 4.5m high	m2	664
	<u>Smooth formwork to sides and soffits</u>		
19	Beams propped up exceeding 1.5m and not exceeding 3.5m high	m2	431
	<u>Smooth formwork to sides and soffits</u>		
20	Column caps	m2	8
	<u>Boxing in rough formwork to form</u>		
21	Chamfers along top or bottom edges	m	15
22	Horizontal chases or grooves in sides	m	52
23	Vertical chases or grooves in sides	m	123
	<b>Carried Forward</b>		R
	Section No. 2 Main office building Bill No. 2 Concrete, Formwork & Reinforcement		

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<b><u>MOVEMENT JOINTS ETC</u></b>			
<u>Two layers of 375 micron dampproof course (One layer of 0,6mm galvanised steel sheet?) in slip joints between horizontal concrete and brick surfaces including cement mortar bed</u>			
24	Exceeding 300mm wide	m2	287
25	Not exceeding 300mm wide	m	302
<u>Expansion joints with 12mm bitumen impregnated softboard between vertical concrete surfaces</u>			
26	Not exceeding 300mm high through slabs	m	302
<u>Saw-cut joints</u>			
27	Saw-cut joints in top of concrete	m	408
<b><u>REINFORCEMENT (PROVISIONAL)</u></b>			
<u>Fabric reinforcement</u>			
28	Type 193 fabric reinforcement in concrete surface beds etc	m2	875
<b><u>REINFORCEMENT</u></b>			
<u>Mild steel reinforcement to structural concrete work</u>			
29	8mm Diameter bars	t	16.00
30	10mm Diameter bars	t	16.00
<u>High tensile steel reinforcement to structural concrete work</u>			
31	10mm Diameter bars	t	16.00
32	12mm Diameter bars	t	16.00
<b>Carried Forward</b>			R
Section No. 2 Main office building Bill No. 2 Concrete, Formwork & Reinforcement			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		<b>Brought Forward</b>			R
	<u>Fabric reinforcement</u>				
33	Type 245 fabric reinforcement in concrete slabs etc	m2	1 261		
<p align="center"><b>Carried Forward to Summary of Section No. 2</b></p> <p>Section No. 2 Main office building Bill No. 2 Concrete, Formwork &amp; Reinforcement</p>					R



Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.2</u></b></p> <p><b><u>BILL NO. 3</u></b></p> <p><b><u>MASONRY</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>BRICKWORK</u></b></p> <p><b><u>Sizes in descriptions</u></b></p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p><u>Face bricks</u></p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc</p> <p><b><u>FOUNDATIONS (PROVISIONAL)</u></b></p> <p><b><u>Brickwork</u></b></p> <p><b><u>Brickwork in extra hard burnt clay bricks in (5:1) cement mortar with all joints grouted in solid with liquid cement mortar.</u></b></p> <p>1 One brick walls m2 142</p> <p><b><u>BRICKWORK SUNDRIES</u></b></p>			
	<p style="text-align: right;"><b>Carried Forward</b></p> <p>Section No. 2 Main office building Bill No. 3 Masonry</p>		R	



Item No		Quantity	Rate	Amount
	<b><u>SECTION NO.2</u></b>			
	<b><u>BILL NO. 4</u></b>			
	<b><u>WATERPROOFING</u></b>			
	<b><u>PREAMBLES</u></b>			
	For preambles see "Specification of Material and Method to be used PW371"			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	<b><u>Waterproofing</u></b>			
	Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs			
	<b><u>DAMP-PROOFING OF WALLS AND FLOORS</u></b>			
	<b><u>One layer of 250 micron "Consol Plastics Gunplas USB Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u></b>			
1	In walls	m2	179	
2	Under surface beds	m2	875	
	<b><u>WATERPROOFING TO ROOFS, BASEMENTS, ETC</u></b>			
	<b><u>Two layer "Derbigum SP4" waterproofing membrane sealed by means of "torchfusion" or "Coldbond 90" adhesive with 75mm side laps and 100mm end laps, laid under a ten-year guarantee, to receive paint or stone protection (elsewhere)</u></b>			
3	On roof slabs	m2	649	
	<b><u>JOINT SEALANTS</u></b>			
	<b>Carried Forward</b>			R
	Section No. 2 Main office building Bill No. 4 Waterproofing			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		Brought Forward		R
	<b><u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc.</u></b>			
4	20 x 20mm In expansion joints in soffits including raking out joint filler as necessary	m	302	
5	20 x 20mm In vertical expansion joints including raking out joint filler as necessary	m	408	
	<b>Carried Forward to Summary of Section No. 2</b>			R
	Section No. 2			
	Main office building			
	Bill No. 4			
	Waterproofing			

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.2</u></b></p> <p><b><u>BILL NO. 6</u></b></p> <p><b><u>CARPENTRY AND JOINERY</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p><b><u>ROOFS ETC</u></b></p> <p><b><u>Plate nailed timber roof truss construction</u></b></p> <p>The following is applicable in respect of roof trusses:</p> <ol style="list-style-type: none"> <li>1. Trusses are at maximum 600mm centres.</li> <li>2. Roof covering is "Kliplok" roof sheeting on 76 x 50mm SAP purlins at maximum 1200mm centres.</li> <li>3. Ceilings are of 4mm fibre cement sheeting on 38 x 38mm brandering.</li> <li>4. Refer to drawings at the end of these Bills of Quantities for full details.</li> <li>5. All trusses are fabricated in a factory by specialists approved by the Architect.</li> <li>6. All trusses shall de designed by a Registered Professional Engineer (in accordance with the draft SABS Code of Practice for the Design of Timber Trusses).</li> <li>7. The Manufacturer of the trusses shall supply a written guarantee that the trusses are designed, manufactured and erected to support the roof covering specified. The guarantee shall be valid for a period of 10 (ten) years.</li> </ol> <p><b><u>SKIRTINGS</u></b></p>			
	<b>Carried Forward</b>		R	
	<p>Section No. 2 Main office building Bill No. 5 Carpentry &amp; Joinery</p>			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		<b>Brought Forward</b>		<b>R</b>
		<b><u>Wrought meranti</u></b>		
1	75 x 19mm Meranti skirting nailed to wall with steel flathead skirting nails, stop all punched nails and unevenness, sandpaper, apply Two coats approved polyuethane suede varnish, sandpaper lightly between coats. Fit 19mm Meranti quarter round to skirting with panel pin nails punched in paint as for skirting.	m	78	
		<b><u>DOORS ETC</u></b>		
		<b><u>Semi-solid core doors with 3mm thick tempered hardboard sides and concealed hardwood edging, hung to steel door frames.</u></b>		
2	40mm Door 813 x 2032mm high (D02)	No	1	
3	40mm Door 813 x 2032mm high (D10)	No	1	
		<b><u>Semi-solid core doors with flush panels and 300x300 louvre panel to be installed and door hung to metal frame</u></b>		
4	40mm Door 813 x 2032mm high (D9)	No	12	
5	40mm Door 813 x 2032mm high (D11)	No	4	
		<b><u>BUDGETARY ALLOWANCE</u></b>		
6	Provide an the amount of R 50 000.00 (Fifty Thousand Rand) nett for Built-in Cupboards to be measured and priced in accordance with this Bill of Quantities and omitted in part or whole as instructed by Principal Agent		Item	50 000.00
7	Provide an the amount of R 500 000.00 (Five hundred Thousand Rand) nett for Office furniture to be measured and priced in accordance with this Bill of Quantities and omitted in part or whole as instructed by Principal Agent		Item	500 000.00
8	Provide an the amount of R 150 000 (One Hundred and Fifty Thousand Rand) nett for Store Shelves to be measured and priced in accordance with this Bill of Quantities and omitted in part or whole as instructed by Principal Agent		Item	150 000.00
		<b>Carried Forward to Summary of Section No. 2</b>		
Section No. 2 Main office building Bill No. 5 Carpentry & Joinery				<b>R</b>

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.2</u></b></p> <p><b><u>BILL NO. 7</u></b></p> <p><b><u>CEILING, PARTITIONS AND ACCESS FLOORING</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Descriptions:</u></b></p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or 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 600mm centres, and where described as "bolted" the bolts have been given elsewhere</p> <p><b><u>CEILING ETC</u></b></p> <p><b><u>SUSPENDED CEILING</u></b></p> <p><b><u>CLEAR PINE CEILING BOARDS</u></b></p> <p><u>220 x 22mm Thick clear pine T &amp; G ceiling board, manufactured in accordance with SANS 9001 : 200, Fixed on pre-painted exposed tee suspension system including main and cross tees necessary hangers, grids etc</u></p>			
1	Ceilings suspended not exceeding 1m below concrete soffits	m2	1 203	
	<p><u>One coat 3:1 Cement plaster to concrete slab/beams worked to a smooth surface with a steel trowel. Prepare and clean. Apply one coat approved undercoat and Two coats approved interior "ACRLIC PVA"Paint.</u></p>			
2	Ceilings to soffits of slabs and beams etc.	m2	77	
	<b>Carried Forward to Summary of Section No. 2</b>			
	Section No. 2 Main office building Bill No. 6 Ceilings, Partitioning & Access Flooring			R

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.2</u></b></p> <p><b><u>BILL NO. 8</u></b></p> <p><b><u>FLOOR COVERINGS, PLASTIC LININGS, ETC</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p>Note : All materials shall be in colours to be selected by the Representative / Agent and, where applicable, laid to approved patterns.</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p>Vinyl tiles, sheeting, wall linings, carpets, etc. are to be supplied and laid complete on a cement screed (screed elsewhere) under guarantee by an approved firm of Specialists.</p> <p>Prices for vinyl products are to include for cleaning off tiles on completion and apply three coats waterproof floor dressing in accordance with the Manufacturer's specification.</p> <p><b><u>EPOXY SCREED</u></b></p> <p><b><u>Self levelling epoxy screed finished smooth and colour coated as per manufactures specification.</u></b></p>			
1	On floors	m2	260	
	<p><b><u>CARPET TILES</u></b></p> <p><b><u>500 x 500 x 6mm Thick tuftile excel 100% antron 6.6 tufted level loop pile loosely tiles on kr4 backing by Vandyck or equal approved all as per manufacturer's specification</u></b></p>			
2	On floors	m2	236	
	<b>Carried Forward to Summary of Section No. 2</b>			R
	<p>Section No. 2 Main office building Bill No. 7 Floor Coverings</p>			



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO.2</u></b>			
	<b><u>BILL NO. 9</u></b>			
	<b><u>IRONMONGERY</u></b>			
	<b><u>PREAMBLES</u></b>			
	For preambles see "Specification of Material and Method to be used PW371"			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	<u>Finishes to ironmongery</u>			
	Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list:			
	BS - Satin bronze lacquered CP - 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			
	<b><u>DOOR HANDLES, ETC</u></b>			
	<b><u>ORION HANDLES , ETC</u></b>			
1	NION mortice cylinder lock set comprising aluminium ORION HANDLE on rose AL6000-05AS with anodised silver finish (INCLUDES A PAIR OF 584-05A S ESCUTCHEONS)	No	2	
2	Solid dove AL 5515 straight pull handle, anodised silver finish.	No	6	
3	UNION 3mm Aluminium cedar right handed pull handle AL5C66R-73AS (Pair)	No	3	
	<b>Carried Forward</b>			R
	Section No. 2 Main office building Bill No. 8 Ironmongery			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		Brought Forward		R
<b><u>LOCKS</u></b>				
<b><u>MORTICE CYLINDER LOCK SET</u></b>				
4	EURO LOCK CASE L-22315-76SS With stainless steel forend, EURO PROFILE DOUBLE CYLINDER 2 x 18SC 66mm long.	No	14	
<b><u>BACK PLATES, ETC</u></b>				
<b><u>Solid:</u></b>				
5	Rectangular backplate "692-05CH" With chrome finish, with EURO lock case	No	8	
<b><u>PUSH PLATES AND KICKING PLATES</u></b>				
<b><u>Solid:</u></b>				
6	200mm high x 1.2mm thick x 813mm long grade 304 satin finished stainless steel kicking plate.	No	6	
<b><u>SUNDRIES</u></b>				
7	3 x 25mm Brass dividing strip between different floor finishes	m	278	
8	38mm Rubber door stop plugged and screwed to wall or floor	No	39	
9	19mm Stainless steel chromium plated towel rail, 600mm long, with end brackets plugged to plastered or tiled wall.	No	4	
10	Natural Anodised Aluminium coat hook assembly 350mm long including black PVC coat hook rail and fixing screws	No	12	
11	Door spring "741scho/en2-4"	No	6	
<b><u>DOORS CLOSERS , FLOOR SPRINGS, ETC</u></b>				
		<b>Carried Forward</b>		R
Section No. 2 Main office building Bill No. 8 Ironmongery				

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<b><u>Door Closers</u></b>			
12	Overhead rack and pinion hydraulic adjustable power 741SCHO EN1-3 Silver slide channel arm overhead door closer with hold open, with adjustable delayed closing, to internal door of width up to 950mm Wide, suitable for minimum wall NIB dimension 60mm	No	4
<b><u>Grab rail</u></b>			
13	Paraplegic steel grab rail type SR2 including fixing in brickwork	No	1
14	Paraplegic steel grab rail type SR1 including fixing in brickwork	No	1
<b><u>CORNER PROTECTORS, COVER AND SEALING STRIPS, ETC.</u></b>			
<b><u>"Clipstrip" or similar and approved</u></b>			
<b><u>MATS</u></b>			
<b><u>"Squeegee" mats</u></b>			
15	600 x 450 x 17mm Door mat laid loose in mat surround	No	3
16	1200 x 450 x 17mm Door mat laid loose in mat surround	No	1
<b><u>BUDGETARY ALLOWANCE</u></b>			
17	Allow the sum of R150 000.00 (One Hundred and Fifty Rands) for Blinds	Item	150 000.00
18	Allow the sum of R100 000.00 (One Hundred Thousand) for signage	Item	100 000.00
<b>Carried Forward to Summary of Section No. 2</b>			R
Section No. 2 Main office building Bill No. 8 Ironmongery			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO.2</u></b>			
	<b><u>BILL NO. 10</u></b>			
	<b><u>STRUCTURAL STEELWORK</u></b>			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	<b><u>Descriptions</u></b>			
	Descriptions of bolts shall be deemed to include nuts and washers			
	Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete			
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete			
	Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete. Where anchor bolts are described as embedded in sides or soffits of concrete it shall be deemed to include holes through formwork.			
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.			
	<b><u>STEEL COLUMNS AND BEAMS</u></b>			
	<b><u>Welded columns in single lengths with flat section base, top, bearer and connection plates bolted to ring beams.</u></b>			
1	Supply & Fabrication of steel structure	t	7.00	
2	Delivery of steel structure to site	t	7.00	
3	Erection of steel structure on ready made footings	t	7.00	
4	Painting of all steel structure components	t	1.00	
	<b>Carried Forward to Summary of Section No. 2</b>			
	Section No. 2 Main office building Bill No. 9 Structural Steelwork			R

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO.2</u></b>			
	<b><u>BILL NO. 11</u></b>			
	<b><u>METALWORK</u></b>			
	<b><u>PREAMBLES</u></b>			
	For preambles see "Specification of Material and Method to be used PW371"			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	All steel is to receive one coat metal primer before leaving the works of the Manufacturer			
	<b><u>PRESSED STEEL DOOR FRAMES</u></b>			
	Unless otherwise described, door frames are to be suitable for 40mm to 44mm thick doors.			
	Ironmongery, etc. The contractor is referred to the "Ironmongery" for ironmongery fixed to steel linings and no claims whatsoever in connection with the fittings of ironmongery to steel linings will be entertained.			
	<b><u>1,2mm Single rebated frames suitable for half and one brick walls</u></b>			
1	Frame for door 813 x 2032mm high	No	18	
	<b><u>ALUMINIUM WINDOWS, DOORS ETC.</u></b>			
	<b><u>Purpose made 'back coated' aluminium doors glazed with and including a combination of 6.38mm thick clear safety and clear glass and complete with all necessary ironmongery</u></b>			
2	Purpose made door, size 900x 2100mm (D01)	No	7	
3	Purpose made door, size 1800 x 2100mm (D03)	No	9	
4	Purpose made door, size 2 810 x 3 335mm (D04)	No	1	
5	Purpose made door, size 5 735 x 3 335mm (D05)	No	1	
	<b>Carried Forward</b>			R
	Section No. 2 Main office building Bill No. 10 Metalwork			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>				R
6	Purpose made door, size 5 140 x 3 335mm (D06)	No	1	
7	Purpose made door, size 5 810 x 3 335mm (D07)	No	1	
8	Purpose made door, size 5 680 x 4 335mm (D08)	No	1	
<b><u>Purpose made 'back coated' aluminium window frames glazed with and including a combination of 6.38mm thick clear safety and clear glass and complete with all necessary ironmongery</u></b>				
9	Purpose made window size, 1200 x 1500mm high. (W01)	No	32	
10	Purpose made window Size, 600 x 600mm high (W02)	No	11	
11	Purpose made window size, 600 x900mm high. (W03)	No	1	
12	Purpose made window size, 2770 x 3340mm high. (W04)	No	1	
13	Purpose made window size, 3080 x 3340mm high (W05)	No	1	
14	Purpose made window size, 5690 x 3340mm high. (W06)	No	1	
15	Purpose made window size, 2770 x 4335mm high (W07)	No	1	
16	Purpose made window size, 3080 x 4335mm high (W08)	No	1	
17	Purpose made window size, 8520 x 3335mm high (W09)	No	2	
18	Purpose made window size, 2746 x 7145mm high (W10)	No	1	
19	Purpose made window size, 2340 x 7930mm high (W11)	No	1	
20	Purpose made window size, 5280 x 7930mm high (W12)	No	1	
<b><u>SUNDRY ALUMINIUM WORK</u></b>				
<b>Carried Forward</b>				R
Section No. 2 Main office building Bill No. 10 Metalwork				

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		<b>Brought Forward</b>			R
	<b><u>Corner protectors</u></b>				
21	50 x 50 x 2mm Angle section corner protectors 1500mm long plugged and screwed to walls at 200mm centres	No	20		
	<b><u>BALUSTRADES, ETC</u></b>				
	<b><u>"Galvanised" welded and bolted patent balustrades to stairs, balconies, etc including bends and ends</u></b>				
22	Glass Balustrades of 1000mm high with 50mm diameter stainless steel stanchions at average 1200mm centres, with steel plates bolted to brickwork and to concrete	m	15		
	<b>Carried Forward to Summary of Section No. 2</b>				
	Section No. 2				
	Main office building				
	Bill No. 10				
	Metalwork				
					R

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO.2</u></b>			
	<b><u>BILL NO. 12</u></b>			
	<b><u>PLASTERING</u></b>			
	<b><u>PREAMBLES</u></b>			
	For preambles see "Specification of Material and Method to be used PW371"			
	<b><u>SCREEDS</u></b>			
	<b><u>Screeds on concrete</u></b>			
1	25mm Thick on floors and landings.	m2	2 187	
	<b><u>INTERNAL PLASTER</u></b>			
	<b><u>Cement plaster on brickwork</u></b>			
2	On walls	m2	2 918	
3	On walls in narrow widths	m2	147.00	
	<b>Carried Forward to Summary of Section No. 2</b>			
	Section No. 2 Main office building Bill No. 11 Plastering			R



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO.2</u></b>			
	<b><u>BILL NO. 13</u></b>			
	<b><u>TILING</u></b>			
	<b><u>PREAMBLES</u></b>			
	For preambles see "Specification of Material and Method to be used PW371"			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	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 cement plaster bedding			
	<b><u>WALL TILING</u></b>			
	<b><u>Approved 300 x 300mm porcelain floor tiles (PC Amount of R200.00/m2 excluding VAT) fixed on 25mm 3:1 cement screed (elsewhere measured) flush pointed with tinted waterproof jointed compound and approved adhesive.</u></b>			
1	On walls	m2	52	
2	On narrow widths	m2	2	
	<b><u>Approved 300 x 300mm porcelain floor tiles (PC Amount of R350.00/m2 excluding VAT) fixed on 25mm 3:1 cement screed (elsewhere measured) flush pointed with tinted waterproof jointed compound and approved adhesive.</u></b>			
3	On floors and landings	m2	947	
4	Skirting of 100mm high cut tile	m	805	
	<b><u>SUNDRIES</u></b>			
	<b>Carried Forward</b>			R
	Section No. 2 Main office building Bill No. 12 Tiling			



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.2</u></b></p> <p><b><u>BILL NO. 14</u></b></p> <p><b><u>PLUMBING AND DRAINAGE (PROVISIONAL)</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><u>uPVC pipes and fittings</u></p> <p>Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings.</p> <p>Soil, waste and vent pipes and fittings shall be solvent weld jointed.</p> <p><u>uPVC pressure pipes and fittings</u></p> <p>Pipes for water supply shall be of the class stated.</p> <p>Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings</p> <p>Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.</p> <p><u>Copper pipes</u></p> <p>Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be approved by the Architect. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.</p> <p><u>Reducing fittings</u></p>			
	<b>Carried Forward</b>		R	
	<p>Section No. 2 Main office building Bill No. 13 Plumbing &amp; Drainage (Provisional)</p>			

<p align="center"><b>Brought Forward</b></p> <p>Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reduces he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reduces, etc will be entertained.</p> <p><u>Wire gratings</u></p> <p>Descriptions of gutter outlets, etc shall be deemed to include wire ballon gratings.</p> <p><u>Exposed concrete surfaces</u></p> <p>Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.</p> <p><u>Excavations</u></p> <p>No claim for rock excavations will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling</p> <p>"Soft rock" and "hard rock" shall be as defined in "Earthworks"</p> <p><u>Laying, backfilling, bedding, etc of pipes</u></p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions</p> <p>Where no manufacturers' instructions exist pipes shall be laid in accordance with clause 5.1 and 5.2 of each of the following:</p> <p>SABS 1200L    Medium -pressure pipelines  LD                Sewers  LE                Stormwater drainage</p> <p>Pipe trnches etc shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5.7, and 7 of SABS 1200</p> <p>DB                Earhworks (Pipe trenches)</p> <p>Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200</p>		R	
<p align="center"><b>Carried Forward</b></p> <p>Section No. 2  Main office building  Bill No. 13  Plumbing &amp; Drainage (Provisional)</p>		R	

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		<b>Brought Forward</b>		R
	LB	Bedding (Pipes)		
		Unless otherwise described bedding of rigid pipes shall be class B bedding		
		<u>Flush pans</u>		
		Flush pans shall have straight or side outlets and "P" or "S" traps as necessary		
		<u>Stainless steel basins, sinks, washtroughs, urinals, etc</u>		
		Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable		
		<u>Waste unions</u>		
		Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings		
		<b><u>Steel section water tanks:</u></b>		
		<b><u>SANITARY FITTINGS</u></b>		
		<b><u>Sanitary Fittings</u></b>		
		<u>Hand wash basin - One tap hole</u>		
1		560 x 405mm White vitreous china wash hand basin complete with and including two 1/2 elbow action chromium plated pillar taps, one tap hole plug, waste, plug and chain concealed brackets, Provide approved 15mm Chromium plated mixer and 40mm bottle trap	No	3
		<u>Hand wash basin - Vanity</u>		
2		495 x 455mm White vitreous china oval shaped self trimming vanity basin with two semi punched tap holes plug, waste, plug and chain to be fixed in vanity slab 1000 x 600mm Fixed to wall by specialist (elsewhere measured) Provide 3 approved 15mm Chromium plated mixer and 40mm bottle trap	No	12
		<u>Hand wash basin - Two tap holes paraplegic</u>		
3		560 x 405mm White vitreous china wash hand basin complete with and including two 1/2 elbow action chromium plated pillar taps, one tap hole plug, waste, plug and chain concealed brackets, Provide approved 15mm Chromium plated mixer and 40mm bottle trap	No	1
		<b>Carried Forward</b>		R
		Section No. 2 Main office building Bill No. 13 Plumbing & Drainage (Provisional)		



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		<b>Brought Forward</b>		R
	<u>Soap dish</u>			
9	150 x 150mm Approved soap dish built into wall as per manufacturer's specifications and details in positions as shown on the detail layouts and details	No	6	
	<b><u>TOILET PAPER DISPENSER,HOLDRES E.T.C</u></b>			
	<b><u>Fixed to wall</u></b>			
	<u>Toilet paper dispenser</u>			
10	Approved toilet paper dispenser fixed against wall as per manufacturer's specifications in positions as shown on detail layout and details	No	5	
	<u>Toilet paper holder</u>			
11	150 x 150mm Toilet paper holder 600mm Above F.F.L in position as shown on the detail	No	9	
	<b><u>TOWEL RAILS E.T.C</u></b>			
	<b><u>Plugged to wall</u></b>			
	<u>Stainless steel towel rail</u>			
12	19mm Diameter stainless steel towel rail, 600mm Long with end brackets plugged to plastered wall	No	6	
	<b><u>TRAPS ETC</u></b>			
	<b><u>"Marley"</u></b>			
13	40mm Deep seal "P" or "S" trap	No	15	
14	40 x 300mm Sink combination for double bowl with deep seal "P" trap	No	1	
	<b><u>Chromium plated</u></b>			
15	40mm Bottle trap	No	9	
	<b><u>TAPS, VALVES, ETC</u></b>			
	<b><u>"Cobra"</u></b>			
16	15mm Chromium plated basin mixer	No	16	
	<b>Carried Forward</b>			R
	Section No. 2 Main office building Bill No. 13 Plumbing & Drainage (Provisional)			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>				R
17	15mm Chromium plated sink mixer	No	1	
18	15mm Chromium plated biptap	No	2	
19	15mm Chromium plated shower mixer	No	6	
20	15mm Chromium plated shower arm	No	6	
21	15mm Chromium plated shower head	No	6	
22	15mm 121RB stopcock	No	10	
23	PB1.10RB vacuum breaker	No	4	
24	PA1.1RB "Kwikflo" 400 kPa pressure reducing valve	No	3	
<b><u>WATER SUPPLIES</u></b>				
<b><u>Class 1 copper pipes</u></b>				
25	15mm Pipe laid in or under floors, chased to walls, fixed to roof timbers, etc.	m	65	
26	22mm Pipe laid in or under floors, chased to walls fixed to roof timbers, etc.	m	66	
27	28mm Pipe laid in / under floors or fixed to walls, roof timbers, etc.	No	40	
28	15 mm Pipe fixed in and including chase in walls	m	50	
29	22mm Pipe fixed in and including chase in walls	m	62	
<b><u>Extra over copper pipes for capillary fittings</u></b>				
30	15mm Fittings	No	35	
31	22mm Fittings	No	31	
32	28mm Fittings	No	27	
<b><u>SANITARY PLUMBING</u></b>				
<b><u>uPVC pipes</u></b>				
33	50mm Pipes fixed to walls, etc.	m	90	
34	110mm Pipes fixed to walls, etc	m	70	
<b>Carried Forward</b>				R
Section No. 2 Main office building Bill No. 13 Plumbing & Drainage (Provisional)				



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<b><u>Extra over uPVC pipes for fittings</u></b>			
35	110mm Access bend	No	42
36	110mm Tee junction	No	20
37	110 x 50mm Reducing junction.	No	23
38	110mm Pan connector.	No	9
39	50mm Bend.	No	35
40	50mm Access bend.	No	23
41	110mm Access junction.	No	26
42	110mm Access reducing junction	No	28
43	110mm Air vent cowl	No	9
<b><u>TESTING</u></b>			
44	Testing water pipe system		Item
<b><u>WATER SUPPLIES</u></b>			
<b><u>Class 0 copper pipes</u></b>			
45	25mm Pipes laid in / under floors or fixed to walls, roof timbers, etc.	m	32
46	32mm Pipes laid in / under floors or fixed to walls, roof timbers, etc.	m	45
<b><u>Extra over class 0 copper pipes for capillary fittings</u></b>			
47	25mm Fittings	No	23
48	32mm Reducing coupling	No	36
49	32mm Elbow	No	18
<b><u>ELECTRIC WATER HEATERS</u></b>			
<b><u>'Kwikot'</u></b>			
50	200 Litre horizontal wall mounted electric water heater	No	1
<b>Carried Forward</b>			R
Section No. 2 Main office building Bill No. 13 Plumbing & Drainage (Provisional)			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		<b>Brought Forward</b>		R
51	100 Litre 'Megaflo' horizontal floor/wall mounted electric water heater.	No	1	
		<b><u>FIRE APPLIANCES ETC</u></b>		
52	Fire hose reel complete with 30m rubber hose, chromium plated stopcock, shut-off nozzle and wall bracket bolted to wall with and including expansion bolts.	No	6	
53	4.5kg DCP Dry powder portable fire extinguisher	No	16	
		<b><u>TESTING</u></b>		
54	Testing water pipe system		Item	
		<b>Carried Forward to Summary of Section No. 2</b>		
Section No. 2				
Main office building				
Bill No. 13				
Plumbing & Drainage (Provisional)				
				R



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO.2</u></b>			
	<b><u>BILL NO. 16</u></b>			
	<b><u>PAINTWORK</u></b>			
	<b><u>PREAMBLES</u></b>			
	For preambles see "Specification of Material and Method to be used PW371"			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	Where described as "prepare, etc, as specified", the full specification for all painting application, primers, undercoats, preparation, etc. are to be strictly in accordance with the relevant Manufacturers' Specification and prices must allow therefor			
	<b><u>PAINTWORK ETC TO NEW WORK</u></b>			
	<b><u>ON CONCRETE SURFACES</u></b>			
	<u>One universal under coat and two coats of ripple paint colour as per architect.</u>			
1	Ceilings and beams	m2	1 280	
	<b><u>ON FLOATED PLASTER</u></b>			
	<b><u>Eggshel</u></b>			
	<u>One coat 4 : 1cement plaster finished to a smooth surface with steel trowel prepare and clean, apply one approved coat alkali resistant primer, one coat universal undercoat and two full coats approved eggshel enamel paint according to manufacturer's specifications colour by Architect.</u>			
2	On internal plastered walls	m2	2 918	
3	On narrow widths	m2	147	
	<b>Carried Forward</b>			R
	Section No. 2 Main office building Bill No. 15 Paintwork			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
	<p><u>One coat 4 : 1 cement plaster finished to a smooth surface with a steel trowel prepared and clean , apply one coat bonding liquid and two coats approved eggshell emulsion paint according to manufacturer's specifications , colour by Architect.</u></p>		
4	On External plastered walls	m2	137
	<b><u>Extra over structural steel paintwork</u></b>		
	<b><u>E.O. for galvanising structural steel works</u></b>		
5	Painting of all steel structure components	t	49.00
	<b><u>ON WOOD</u></b>		
	<b><u>Prepare and clean, apply one coat hardboard primer, one coat universal undercoat and two full coats high gloss enamel paint</u></b>		
6	On doors	m2	74
	<b><u>Sand down to a smooth finish, stop with "Polycell Woodfiller", apply one coat "Plascon Woodcare Clear Varnish Interior" thinned with 1:3 mineral turpentine (AZH 1) and two finishing coats "Plascon Woodcare Clear Varnish Interior" semi-gloss varnish</u></b>		
7	On skirtings, etc not exceeding 300 mm girth	m	78
	<b>Carried Forward to Summary of Section No. 2</b>		
	Section No. 2		
	Main office building		
	Bill No. 15		
	Paintwork		
			R



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.3</u></b></p> <p><b><u>BILL NO. 1</u></b></p> <p><b><u>EARTHWORKS (PROVISIONAL)</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Nature of ground</u></b></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><b><u>Carting away of excavated material</u></b></p> <p>Description 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> <p><b><u>EARTHWORKS</u></b></p> <p><b><u>SITE CLEARANCE ETC</u></b></p> <p><b><u>Site clearance</u></b></p>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	120	
2	Rip and scarify ground level to a depth of 150mm and consolidate to 90% mod. AASHTO density (minimum CBR 3)	m2	120	
	<p><b><u>REMOVAL OF TREES ETC</u></b></p>			
	<b>Carried Forward</b>			R
	Section No. 3 Mini Laboratory Bill No. 1 Earthworks			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<b><u>Taking out and removing, grubbing up roots and filling in holes</u></b>			
3	Tree stump exceeding 200mm and not exceeding 500mm girth	No	1
4	Tree stump exceeding 500mm and not exceeding 1000mm girth	No	1
<b><u>EXCAVATION, FILLING, ETC</u></b>			
<b><u>Excavation in earth not exceeding 2m deep</u></b>			
5	Trenches	m3	18
<b><u>Extra over trench and hole excavations in earth for excavation in</u></b>			
6	Soft rock	m3	8
7	Hard rock	m3	4
<b><u>Extra over all excavations for carting away</u></b>			
8	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	18
<b><u>Risk of collapse of excavations</u></b>			
9	Sides of trench and hole excavations not exceeding 1,5m deep	m2	32
<b><u>Keeping excavations free of water</u></b>			
10	Keeping excavations free of all water other than subterranean water		Item
<b><u>Earth filling obtained from the excavations and compacted to 93% Mod AASHTO density</u></b>			
11	Under floors, steps, pavings, etc	m3	12
12	Backfilling to trenches, holes, etc	m3	14
<b><u>Earth filling supplied by the contractor compacted to 93% Mod AASHTO density.</u></b>			
13	Under floors, steps paving, etc	m3	20
<b>Carried Forward</b>			R
Section No. 3 Mini Laboratory Bill No. 1 Earthworks			



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<b><u>Coarse river sand filling supplied by the contractor</u></b>			
14	Under floors etc	m3	20
<b><u>Compaction of surfaces</u></b>			
15	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	26
<b><u>Prescribed density tests on filling</u></b>			
16	"Modified AASHTO Density" test	No	8
<b><u>SOIL POISONING</u></b>			
<b><u>Soil insecticide</u></b>			
17	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	18
18	To bottoms and sides of trenches etc	m2	46
<b>Carried Forward to Summary of Section No. 3</b>			R
Section No. 3			
Mini Laboratory			
Bill No. 1			
Earthworks			

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.3</u></b></p> <p><b><u>BILL NO. 2</u></b></p> <p><b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Model Preambles For Trades"</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><u>Cost of tests</u></p> <p>The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the principal agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the principal agent. (Test cubes are measured separately)</p> <p><u>Breeze concrete</u></p> <p>Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (1:12); the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated</p> <p><u>Lightweight concrete</u></p> <p>Lightweight concrete shall have a density of 600kg/m<sup>3</sup> for the top 50mm and 400kg/m<sup>3</sup> for the remaining thickness. The minimum thickness at outlets, channels, etc shall be 50mm</p>			
	<b>Carried Forward</b>			R
	<p>Section No. 3 Mini Laboratory Bill No. 2 Concrete, Formwork &amp; Reinforcement</p>			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>				R
<u>Formwork</u>				
<p>Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use</p> <p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself</p> <p>Formwork to soffits of solid slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described</p> <p>Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described</p> <p>Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"</p>				
<b><u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>				
<u>15MPa/19mm concrete</u>				
1	Surface blinding under footings and bases	m3	7	
2	Surface blinding under surface beds	m3	12	
<b><u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>				
<b>Carried Forward</b>				R
<p>Section No. 3 Mini Laboratory Bill No. 2 Concrete, Formwork &amp; Reinforcement</p>				

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
	<u>25MPa/19mm concrete</u>		
3	Surface beds cast in panels on waterproofing	m3	33
	<u>40MPa/19mm concrete</u>		
4	Ramps	m3	1
5	Strip footings	m3	28
<b><u>TEST CUBES</u></b>			
6	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	16
<b><u>CONCRETE SUNDRIES</u></b>			
	<u>Cutting off and removing excess length of precast concrete pile as necessary including stripping back for a height not exceeding ?mm to expose reinforcement, trimming to defined level and bending reinforcement as necessary for casting into pile cap</u>		
7	300mm Joint	m	37
	<u>Finishing top surfaces of concrete smooth with a wood float</u>		
8	Surface beds, slabs, etc	m2	134
<b><u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u></b>			
<b><u>REINFORCEMENT (PROVISIONAL)</u></b>			
	<u>Fabric reinforcement</u>		
9	Type 193 fabric reinforcement in concrete surface beds etc	m2	26
<b><u>REINFORCEMENT</u></b>			
<b>Carried Forward</b>			R
Section No. 3 Mini Laboratory Bill No. 2 Concrete, Formwork & Reinforcement			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<u>Mild steel reinforcement to structural concrete work</u>			
10	8mm Diameter bars	t	1.38
11	10mm Diameter bars	t	1.38
<u>High tensile steel reinforcement to structural concrete work</u>			
12	10mm Diameter bars	t	1.38
13	12mm Diameter bars	t	1.38
<b><u>APRONS AROUND BUILDINGS</u></b>			
<u>Compaction of surfaces</u>			
14	Compaction of ground surface under aprons including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density	m2	135
<u>15 MPa/20 mm concrete</u>			
15	Aprons cast in panels to falls	m3	20
16	Thickening down apron on edge 110mm x 200mm wide, incl. excavation, backfilling, cart away, etc.	m	65
<u>Finishing top surfaces of concrete smooth with a wood float</u>			
17	Surface beds, roof slabs etc	m2	131
<u>Smooth formwork to sides</u>			
18	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	40
<u>Fabric reinforcement</u>			
19	Type 245 fabric reinforcement in concrete slabs etc	m2	52
<b>Carried Forward to Summary of Section No. 3</b>			R
Section No. 3 Mini Laboratory Bill No. 2 Concrete, Formwork & Reinforcement			

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.3</u></b></p> <p><b><u>BILL NO. 3</u></b></p> <p><b><u>MASONRY</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>BRICKWORK</u></b></p> <p><b><u>Sizes in descriptions</u></b></p> <p>Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick</p> <p><u>Face bricks</u></p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc</p> <p><b><u>FOUNDATIONS (PROVISIONAL)</u></b></p> <p><b><u>Brickwork</u></b></p> <p><b><u>Brickwork in extra hard burnt clay bricks in (5:1) cement mortar with all joints grouted in solid with liquid cement mortar.</u></b></p>			
1	One brick walls	m2	110	
	<p><b><u>BRICKWORK SUNDRIES</u></b></p> <p style="text-align: right;"><b>Carried Forward</b></p> <p>Section No. 3 Mini Laboratory Bill No. 3 Masonry</p>		R	

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<b><u>Brickwork reinforcement</u></b>			
2	Brick reinforcement 150mm wide built into brick walls with sufficient laps at end joints, angles and intersections (measured net)	m	116
<b><u>SUPERSTRUCTURE</u></b>			
<b><u>Brickwork of NFP bricks in class II mortar</u></b>			
3	One brick walls	m2	140
4	Half brick walls	m2	18
<b><u>BRICKWORK SUNDRIES</u></b>			
<b><u>Brickwork reinforcement</u></b>			
5	Brick reinforcement 150mm wide built into brick walls with sufficient laps at end joints, angles and intersections (measured net)	m	733
<b><u>Prestressed fabricated lintels</u></b>			
6	100 x 70mm Lintels in lengths not exceeding 3m	m	41
<b><u>FACE BRICKWORK</u></b>			
<b><u>External facings in approved face bricks (FBS) with a PC Amount of R3,500.00 per thousand bricks delivered to site (excluding VAT) pointed with square recessed horizontal and vertical joints.</u></b>			
7	Extra over brickwork for face brickwork in foundations (Provisional)	m2	17
8	Extra over brickwork for face brickwork in superstructure	m2	168
9	Extra over ordinary brickwork in beamfilling for facing and pointing in stretcher bond	m2	17
10	230mm Wide sill set sloping and slightly projecting	m	15
11	Face brick-on-edge flat lintel course in cement mortar 220mm wide on soffit and pointing on soffit and both sides.	m	4
<b>Carried Forward</b>			R
Section No. 3 Mini Laboratory Bill No. 3 Masonry			





**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO.3</u></b>			
	<b><u>BILL NO. 4</u></b>			
	<b><u>WATERPROOFING</u></b>			
	<b><u>PREAMBLES</u></b>			
	For preambles see "Specification of Material and Method to be used PW371"			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	<b><u>Waterproofing</u></b>			
	Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs			
	<b><u>DAMP-PROOFING OF WALLS AND FLOORS</u></b>			
	<b><u>One layer of 375 micron "Consol Plastics Brikgrip DPC" embossed damp proof course</u></b>			
1	In walls	m2	19	
	<b><u>One layer of 250 micron "Consol Plastics Gunplas USB Green" waterproof sheeting sealed at laps with "Gunplas Pressure Sensitive Tape"</u></b>			
2	Under surface beds	m2	134	
	<b><u>WATERPROOFING TO ROOFS, BASEMENTS, ETC</u></b>			
	<b><u>Two layer "Derbigum SP4" waterproofing membrane sealed by means of "torchfusion" or "Coldbond 90" adhesive with 75mm side laps and 100mm end laps, laid under a ten-year guarantee, to receive paint or stone protection (elsewhere)</u></b>			
3	On roof slabs	m2	204	
	<b>Carried Forward</b>			R
	Section No. 3 Mini Laboratory Bill No. 4 Waterproofing			



Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.3</u></b></p> <p><b><u>BILL NO. 6</u></b></p> <p><b><u>CARPENTRY AND JOINERY</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p><b><u>ROOFS ETC</u></b></p> <p><b><u>Plate nailed timber roof truss construction</u></b></p> <p>The following is applicable in respect of roof trusses:</p> <ol style="list-style-type: none"> <li>1. Trusses are at maximum 600mm centres.</li> <li>2. Roof covering is "Kliplok" roof sheeting on 76 x 50mm SAP purlins at maximum 1200mm centres.</li> <li>3. Ceilings are of 4mm fibre cement sheeting on 38 x 38mm brandering.</li> <li>4. Refer to drawings at the end of these Bills of Quantities for full details.</li> <li>5. All trusses are fabricated in a factory by specialists approved by the Architect.</li> <li>6. All trusses shall be designed by a Registered Professional Engineer (in accordance with the draft SABS Code of Practice for the Design of Timber Trusses).</li> <li>7. The Manufacturer of the trusses shall supply a written guarantee that the trusses are designed, manufactured and erected to support the roof covering specified. The guarantee shall be valid for a period of 10 (ten) years.</li> </ol> <p><b><u>DOORS ETC</u></b></p> <p><b><u>Semi-solid core doors with 3mm thick tempered hardboard sides and concealed hardwood edging, hung to steel door frames, with bottom cut to match door</u></b></p>			
1	40mm Door 813 x 1900mm high (D12)	No	1	
	<p style="text-align: right;"><b>Carried Forward to Summary of Section No. 3</b></p> <p>Section No. 3 Mini Laboratory Bill No. 5 Carpentry &amp; Joinery</p>		R	

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.3</u></b></p> <p><b><u>BILL NO. 7</u></b></p> <p><b><u>CEILING, PARTITIONS AND ACCESS FLOORING</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Descriptions:</u></b></p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or 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 600mm centres, and where described as "bolted" the bolts have been given elsewhere</p> <p><b><u>CEILING ETC</u></b></p> <p><b><u>SUSPENDED CEILING</u></b></p> <p><b><u>CLEAR PINE CEILING BOARDS</u></b></p> <p><u>220 x 22mm Thick clear pine T &amp; G ceiling board, manufactured in accordance with SANS 9001 : 200, Fixed on pre-painted exposed tee suspension system including main and cross tees necessary hangers, grids etc</u></p>			
1	Ceilings suspended not exceeding 1m below concrete soffits	m2	134	
	<p align="center"><b>Carried Forward to Summary of Section No. 3</b></p> <p>Section No. 3 Mini Laboratory Bill No. 6 Ceilings, Partitioning &amp; Access Flooring</p>		R	

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.3</u></b></p> <p><b><u>BILL NO. 9</u></b></p> <p><b><u>IRONMONGERY</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><u>Finishes to ironmongery</u></p> <p>Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list:</p> <p>BS - Satin bronze lacquered            CP - 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</p> <p><b><u>DOOR HANDLES, ETC</u></b></p> <p><b><u>ORION HANDLES , ETC</u></b></p>			
1	<p>NION mortice cylinder lock set comprising aluminium ORION HANDLE on rose AL6O00-05AS with anodised silver finish (INCLUDES A PAIR OF 584-05A S ESCUTCHEONS)</p>	No	1	
	<p><b><u>LOCKS</u></b></p>			
	<p><b>Carried Forward</b></p>			R
	<p>Section No. 3            Mini Laboratory            Bill No. 7            Ironmongery</p>			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		Brought Forward		R
		<b><u>MORTICE CYLINDER LOCK SET</u></b>		
2	EURO LOCK CASE L-22315-76SS With stainless steel forend, EURO PROFILE DOUBLE CYLINDER 2 x 18SC 66mm long.	No	1	
		<b><u>BACK PLATES, ETC</u></b>		
		<b><u>Solid:</u></b>		
3	Rectangular backplate "692-05CH" With chrome finish, with EURO lock case	No	2	
		<b><u>PUSH PLATES AND KICKING PLATES</u></b>		
		<b><u>Solid:</u></b>		
4	200mm high x 1.2mm thick x 750mm long grade 304 satin finished stainless steel kicking plate.	No	1	
5	200mm high x 1.2mm thick x 813mm long grade 304 satin finished stainless steel kicking plate.	No	1	
		<b><u>SUNDRIES</u></b>		
6	3 x 25mm Brass dividing strip between different floor finishes	m	1	
7	38mm Rubber door stop plugged and screwed to wall or floor	No	1	
8	19mm Stainless steel chromium plated towel rail, 600mm long, with end brackets plugged to plastered or tiled wall.	No	1	
9	Natural Anodised Aluminium coat hook assembly 350mm long including black PVC coat hook rail and fixing screws	No	1	
		<b><u>DOORS CLOSERS , FLOOR SPRINGS, ETC</u></b>		
		<b><u>Door Closers</u></b>		
10	Overhead rack and pinion hydraulic adjustable power 741SCHO EN1-3 Silver slide channel arm overhead door closer with hold open, with adjustable delayed closing, to internal door of width up to 950mm Wide, suitable for minimum wall NIB dimension 60mm	No	1	
		<b>Carried Forward</b>		R
Section No. 3 Mini Laboratory Bill No. 7 Ironmongery				



Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.3</u></b></p> <p><b><u>BILL NO. 10</u></b></p> <p><b><u>METALWORK</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p>All steel is to receive one coat metal primer before leaving the works of the Manufacturer</p> <p><b><u>STEEL DOORS</u></b></p> <p>Unless otherwise described, door frames are to be suitable for 40mm to 44mm thick doors.</p> <p>Ironmongery, etc. The contractor is referred to the "Ironmongery" for ironmongery fixed to steel linings and no claims whatsoever in connection with the fittings of ironmongery to steel linings will be entertained.</p> <p><b><u>Steel louvred doors</u></b></p>			
1	<p>1750 x 2500mm High steel door opening with steel louvred ventilation openings over at least 60% on the door area as per Engineer's specification. Make provision for knight latch and pad flock.</p>	No	1	
	<p><b><u>Steel ventilation louvres</u></b></p>			
2	<p>Vermin proof 600 x 600mm steel ventilation louvres</p>	No	3	
	<p><b><u>PRESSED STEEL DOOR FRAMES</u></b></p> <p>Unless otherwise described, door frames are to be suitable for 40mm to 44mm thick doors.</p> <p>Ironmongery, etc. The contractor is referred to the "Ironmongery" for ironmongery fixed to steel linings and no claims whatsoever in connection with the fittings of ironmongery to steel linings will be entertained.</p>			
	<b>Carried Forward</b>			R
	<p>Section No. 3 Mini Laboratory Bill No. 8 Metalwork</p>			



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<b><u>1,2mm Double rebated frames suitable for one brick walls</u></b>			
3	Frame for door 813 x 2032mm high	No	1
<b><u>STEEL ROLLER SHUTTERS ETC</u></b>			
4	Manual push-up slatted roller shutter for 2400 x 2500mm high opening	No	1
5	Manual push-up slatted roller shutter for 6200 x 2100mm high opening	No	2
<b><u>ALUMINIUM WINDOWS, DOORS ETC,</u></b>			
<b><u>Standard residential steel windows with 10 x 10mm mild steel horizontal B2 pattern burglar bars to SABS 338 to opening sashes</u></b>			
6	Window type NE1, 533 x 654mm high (W6)	No	1
<b>Carried Forward to Summary of Section No. 3</b>			R
Section No. 3			
Mini Laboratory			
Bill No. 8			
Metalwork			

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO.3</u></b>			
	<b><u>BILL NO. 11</u></b>			
	<b><u>PLASTERING</u></b>			
	<b><u>PREAMBLES</u></b>			
	For preambles see "Specification of Material and Method to be used PW371"			
	<b><u>SCREEDS</u></b>			
	<b><u>Screeds on concrete</u></b>			
1	25mm Thick on floors and landings.	m2	26	
	<b><u>INTERNAL PLASTER</u></b>			
	<b><u>Cement plaster on brickwork</u></b>			
2	On walls	m2	60	
3	On walls in narrow widths	m2	11.16	
	<b>Carried Forward to Summary of Section No. 3</b>			
	Section No. 3 Mini Laboratory Bill No. 9 Plastering			R

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO.3</u></b>			
	<b><u>BILL NO. 12</u></b>			
	<b><u>TILING</u></b>			
	<b><u>PREAMBLES</u></b>			
	For preambles see "Specification of Material and Method to be used PW371"			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	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 cement plaster bedding			
	<b><u>WALL TILING</u></b>			
	<b><u>Approved 200x 200mm ceramic floor tiles (PC Amount of R220.00/m2 excluding VAT) fixed on 25mm screed (elsewhere measured) flush pointed with tinted waterproof jointed compound and approved adhesive</u></b>			
1	On walls	m2	2	
2	On narrow widths	m2	2	
	<b><u>FLOOR TILING</u></b>			
	<b><u>Approved 300x300mm ceramic floor tiles (PC Amount of R350.00/m2 excluding VAT) fixed on 25mm screed (elsewhere measured) flush pointed with tinted waterproof jointed compound and approved adhesive.</u></b>			
3	On floors and landings	m2	26	
4	Skirting of 100mm high cut tile	m	10	
	<b><u>SUNDRIES</u></b>			
	<b>Carried Forward</b>			R
	Section No. 3 Mini Laboratory Bill No. 10 Tiling			



Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.3</u></b></p> <p><b><u>BILL NO. 13</u></b></p> <p><b><u>PLUMBING AND DRAINAGE (PROVISIONAL)</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><u>uPVC pipes and fittings</u></p> <p>Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings.</p> <p>Soil, waste and vent pipes and fittings shall be solvent weld jointed.</p> <p><u>uPVC pressure pipes and fittings</u></p> <p>Pipes for water supply shall be of the class stated.</p> <p>Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings</p> <p>Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.</p> <p><u>Copper pipes</u></p> <p>Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be approved by the Architect. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground.</p> <p><u>Reducing fittings</u></p>			
	<b>Carried Forward</b>			R
	<p>Section No. 3 Mini Laboratory Bill No. 11 Plumbing &amp; Drainage (Provisional)</p>			

<p style="text-align: center;"><b>Brought Forward</b></p> <p>Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reduces he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reduces, etc will be entertained.</p> <p><u>Wire gratings</u></p> <p>Descriptions of gutter outlets, etc shall be deemed to include wire ballon gratings.</p> <p><u>Exposed concrete surfaces</u></p> <p>Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.</p> <p><u>Excavations</u></p> <p>No claim for rock excavations will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling</p> <p>"Soft rock" and "hard rock" shall be as defined in "Earthworks"</p> <p><u>Laying, backfilling, bedding, etc of pipes</u></p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions</p> <p>Where no manufacturers' instructions exist pipes shall be laid in accordance with clause 5.1 and 5.2 of each of the following:</p> <p>SABS 1200L    Medium -pressure pipelines  LD                Sewers  LE                Stormwater drainage</p> <p>Pipe trnches etc shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5.7, and 7 of SABS 1200</p> <p>DB                Earhworks (Pipe trenches)</p> <p>Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200</p>		R	
<p style="text-align: center;"><b>Carried Forward</b></p> <p>Section No. 3  Mini Laboratory  Bill No. 11  Plumbing &amp; Drainage (Provisional)</p>		R	

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		<b>Brought Forward</b>		R
	LB	Bedding (Pipes)		
		Unless otherwise described bedding of rigid pipes shall be class B bedding		
		<u>Flush pans</u>		
		Flush pans shall have straight or side outlets and "P" or "S" traps as necessary		
		<u>Stainless steel basins, sinks, washtroughs, urinals, etc</u>		
		Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable		
		<u>Waste unions</u>		
		Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings		
		<b><u>Steel section water tanks:</u></b>		
		<b><u>SANITARY FITTINGS</u></b>		
		<b><u>Sanitary Fittings</u></b>		
		<u>Hand wash basin - One tap hole</u>		
1		560 x 405mm White vitreous china wash hand basin complete with and including two 1/2 elbow action chromium plated pillar taps, one tap hole plug, waste, plug and chain concealed brackets, Provide approved 15mm Chromium plated mixer and 40mm bottle trap	No	1
		<u>Wash down pan</u>		
2		WC suite comprising white vitreous china pan with P trap, 9 litre low-level vitreous china cistern complete with valves syphonic fitting, ball valve and matching flush pipe and heavy duty white single flap seat.	No	1
		<u>Shower seat</u>		
3		190 x 320 x 360mm Roman dietsche ABS plastic folding shower seat with anodized aluminium frame colour White ( code: 220841) Plugged and screwed to wall with stainless steel screws	No	1
		<b>Carried Forward</b>		R
		Section No. 3 Mini Laboratory Bill No. 11 Plumbing & Drainage (Provisional)		

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
	<u>Shower and tray</u>		
4	Shower complete with shower tray as per drawing	No	1
<b><u>SOAP DISPENSER AND SOAP DISHES E.T.C</u></b>			
<b><u>Fixed to wall</u></b>			
<u>Soap dispenser</u>			
5	Approved soap dispenser , top-up system with 800ml Capacity fixed to wall in positions as shown on the detail layouts and details, all as per manufacturer's specification	No	1
<u>Soap dish</u>			
6	150 x 150mm Approved soap dish built into wall as per manufacturer's specifications and details in positions as shown on the detail layouts and details	No	1
<b><u>TOILET PAPER DISPENSER,HOLDRES E.T.C</u></b>			
<b><u>Fixed to wall</u></b>			
<u>Toilet paper dispenser</u>			
7	Approved toilet paper dispenser fixed against wall as per manufacturer's specifications in positions as shown on detail layout and details	No	1
<u>Toilet paper holder</u>			
8	150 x 150mm Toilet paper holder 600mm Above F.F.L in position as shown on the detail	No	1
<b><u>TOWEL RAILS E.T.C</u></b>			
<b><u>Plugged to wall</u></b>			
<u>Stainless steel towel rail</u>			
9	19mm Diameter stainless steel towel rail, 600mm Long with end brackets plugged to plastered wall	No	1
<b><u>TRAPS ETC</u></b>			
<b>Carried Forward</b>			R
Section No. 3 Mini Laboratory Bill No. 11 Plumbing & Drainage (Provisional)			



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>				R
	<b><u>"Marley"</u></b>			
10	40mm Deep seal "P" or "S" trap	No	1	
	<b><u>Chromium plated</u></b>			
11	40mm Bottle trap	No	1	
	<b><u>TAPS, VALVES, ETC</u></b>			
	<b><u>"Cobra"</u></b>			
12	Cobra Watertech 20mm conical handshower cradle for baths/shower divetor mixers ( code: 006S-20).  Cobra Watertech Noka 15mm chrome plated wall mounted underwall mixer ( code: NA : 956), Manufactured in accordance with SANS 226:2004 Type 2 (BS 5412)	No	1	
13	15mm shower rose with swivel action	No	1	
14	15mm overhead shower arm	No	1	
15	40mm shower "P" trap c/w grating	No	1	
16	15mm Chromium plated basin mixer	No	1	
17	15mm 121RB stopcock	No	1	
18	PB1.10RB vacuum breaker	No	1	
19	PA1.1RB "Kwikflo" 400 kPa pressure reducing valve	No	1	
	<b><u>WATER SUPPLIES</u></b>			
	<b><u>Class 1 copper pipes</u></b>			
20	15mm Pipe laid in or under floors, chased to walls, fixed to roof timbers, etc.	m	6	
21	22mm Pipe laid in or under floors, chased to walls fixed to roof timbers, etc.	m	8	
22	28mm Pipe laid in / under floors or fixed to walls, roof timbers, etc.	No	5	
23	15 mm Pipe fixed in and including chase in walls	m	4	
	<b>Carried Forward</b>			R
	Section No. 3 Mini Laboratory Bill No. 11 Plumbing & Drainage (Provisional)			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>				R
24	22mm Pipe fixed in and including chase in walls	m	6	
	<b><u>Extra over copper pipes for capillary fittings</u></b>			
25	15mm Fittings	No	5	
26	22mm Fittings	No	6	
27	28mm Fittings	No	4	
	<b><u>SANITARY PLUMBING</u></b>			
	<b><u>uPVC pipes</u></b>			
28	50mm Pipes fixed to walls, etc.	m	15	
29	110mm Pipes fixed to walls, etc	m	20	
	<b><u>Extra over uPVC pipes for fittings</u></b>			
30	110mm Access bend	No	4	
31	110mm Tee junction	No	6	
32	110 x 50mm Reducing junction.	No	4	
33	110mm Pan connector.	No	1	
34	50mm Bend.	No	2	
35	50mm Access bend.	No	4	
36	110mm Access junction.	No	4	
37	110mm Access reducing junction	No	6	
38	110mm Air vent cowl	No	1	
	<b><u>TESTING</u></b>			
39	Testing water pipe system		Item	
	<b><u>WATER SUPPLIES</u></b>			
	<b><u>Class 0 copper pipes</u></b>			
40	25mm Pipes laid in / under floors or fixed to walls, roof timbers, etc.	m	15	
	<b>Carried Forward</b>			R
	Section No. 3 Mini Laboratory Bill No. 11 Plumbing & Drainage (Provisional)			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
41	32mm Pipes laid in / under floors or fixed to walls, roof timbers, etc.	m	14
<b><u>Extra over class 0 copper pipes for capillary fittings</u></b>			
42	25mm Fittings	No	4
43	32mm Reducing coupling	No	6
44	32mm Elbow	No	4
<b><u>ELECTRIC WATER HEATERS</u></b>			
<b><u>'Kwikot'</u></b>			
45	200 Litre horizontal wall mounted electric water heater	No	1
<b><u>FIRE APPLIANCES ETC</u></b>			
46	Fire hose reel complete with 30m rubber hose, chromium plated stopcock, shut-off nozzle and wall bracket bolted to wall with and including expansion bolts.	No	1
47	4.5kg DCP Dry powder portable fire extinguisher	No	1
<b><u>TESTING</u></b>			
48	Testing water pipe system		Item
<b>Carried Forward to Summary of Section No. 3</b>			R
Section No. 3			
Mini Laboratory			
Bill No. 11			
Plumbing & Drainage (Provisional)			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO.3</u></b></p> <p><b><u>BILL NO. 14</u></b></p> <p><b><u>GLAZING</u></b></p> <p><b><u>PREAMBLES</u></b></p> <p>For preambles see "Specification of Material and Method to be used PW371"</p> <p><b><u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u></b></p> <p><b><u>6mm Silvered float glass copper backed mirrors with polished edges fixed with 4 round nose dome screws to walls</u></b></p>			
1	Mirror 900 x 450 x 6mm Thick	No	1	
	<p><b>Carried Forward to Summary of Section No. 3</b></p> <p>Section No. 3 Mini Laboratory Bill No. 12 Glazing</p>			R

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO.3</u></b>			
	<b><u>BILL NO. 15</u></b>			
	<b><u>PAINTWORK</u></b>			
	<b><u>PREAMBLES</u></b>			
	For preambles see "Specification of Material and Method to be used PW371"			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	Where described as "prepare, etc, as specified", the full specification for all painting application, primers, undercoats, preparation, etc. are to be strictly in accordance with the relevant Manufacturers' Specification and prices must allow therefor			
	<b><u>PAINTWORK ETC TO NEW WORK</u></b>			
	<b><u>ON FLOATED PLASTER</u></b>			
	<b><u>Acrylic emulsion</u></b>			
	<u>One coat 4 : 1 cement plaster finished to a smooth surface with a steel trowel prepared and clean , apply one coat bonding liquid and two coats approved acrylic emulsion paint according to manufacturer's specifications , colour by Architect.</u>			
1	On internal plastered walls	m2	84	
	<b><u>Prepare and clean, apply one coat hardboard primer, one coat universal undercoat and two full coats high gloss enamel paint</u></b>			
2	On doors	m2	4	
	<b>Carried Forward to Summary of Section No. 3</b>			R
	Section No. 3 Mini Laboratory Bill No. 13 Paintwork			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Section No. 3				
Mini Laboratory				
<b><u>SECTION SUMMARY - Mini Laboratory</u></b>				
<b>Bill No</b>		<b>Page No</b>		<b>Amount</b>
1	Earthworks	153		
2	Concrete, Formwork & Reinforcement	157		
3	Masonry	160		
4	Waterproofing	162		
5	Carpentry & Joinery	163		
6	Ceilings, Partitioning & Access Flooring	164		
7	Ironmongery	167		
8	Metalwork	169		
9	Plastering	170		
10	Tiling	172		
11	Plumbing & Drainage (Provisional)	179		
12	Glazing	180		
13	Paintwork	181		
	<b>Carried to Final Summary</b>			R
	Section No. 3			
	Mini Laboratory			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO 4</u></b>			
	<b><u>BILL NO. 1</u></b>			
	<b><u>EARTHWORKS (PROVISIONAL)</u></b>			
	<b><u>STANDARD PREAMBLES</u></b>			
	The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill			
	<u>Nature of ground</u>			
	The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "hard rock" or "soft rock".			
	<u>CARTING AWAY OF EXCAVATED MATERIAL</u>			
	Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or alternatively, from stock piles situated on the building site.			
	<u>PRICES</u>			
	Prices for all filling and carting away of surplus material must make allowance for bulking.			
	-----			
	<b><u>EARTHWORKS</u></b>			
	<u>Excavation in earth not exceeding 2m deep</u>			
1	Trenches	m3	20	
	<u>Extra over trench and hole excavations in earth for excavation in</u>			
2	Soft rock	m3	5	
3	Hard rock	m3	1	
	<b>Carried Forward</b>			R
	Section No. 4 Guardhouse Bill No. 1 EARTHWORKS (PROVISIONAL)			







Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO 4</u></b></p> <p><b><u>BILL NO. 2</u></b></p> <p><b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b></p> <p><b><u>STANDARD PREAMBLES</u></b></p> <p>The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill</p> <p><u>Cost of tests</u></p> <p>The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the architect. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the architect. (Test cubes are measured separately).</p> <p><u>Formwork</u></p> <p>Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use.</p> <p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself.</p>			
	<b>Carried Forward</b>			R
	<p>Section No. 4 Guardhouse Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT</p>			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<p>Formwork to soffits of solid slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described</p> <p>Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons.</p> <p>Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"</p> <p align="center">-----</p>			
<b><u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>			
<u>25MPa/20mm concrete</u>			
1	Foundations	m3	11
2	Surface beds	m3	4
3	slabs	m3	11
<b><u>TEST BLOCKS</u></b>			
4	Making and testing 150 x 150 x 150mm concrete strength test cube	No	8
<b><u>CONCRETE SUNDRIES</u></b>			
<u>Finishing top surfaces of concrete smooth with a wood float</u>			
5	Surface beds, ramps, slabs, etc	m2	54
<b><u>ROUGH FORMWORK</u></b>			
<u>Rough formwork to sides</u>			
6	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	13
<b><u>MOVEMENT JOINTS, ETC</u></b>			
<b>Carried Forward</b>			R
<p>Section No. 4 Guardhouse Bill No. 2 CONCRETE, FORMWORK AND REINFORCEMENT</p>			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<u>Joint forming material in movement joints:</u>			
7	10mm Soft board expansion joint material not exceeding 300mm wide	m	7
8	12mm Soft board expansion joint material not exceeding 300mm wide	m	7
<u>Saw cut joints</u>			
9	5 x 30mm Saw cut joints in top of concrete	m	14
<u>Mesh Reinforcement</u>			
10	Type 193 mesh reinforcement in concrete surface beds, slabs, etc	m2	44
<b>Carried Forward to Summary of Section No. 4</b>			R
Section No. 4			
Guardhouse			
Bill No. 2			
CONCRETE, FORMWORK AND REINFORCEMENT			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO 4</u></b>			
	<b><u>BILL NO. 3</u></b>			
	<b><u>MASONRY</u></b>			
	<b><u>STANDARD PREAMBLES</u></b>			
	The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill			
	<b><u>Brickwork</u></b>			
	<u>Sizes in descriptions</u>			
	Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick.			
	<b><u>Face bricks</u></b>			
	Bricks shall be ordered timeously to obtain uniformity in size and colour			
	<b><u>Pointing</u></b>			
	Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc			
	-----			
	<b><u>MASONRY</u></b>			
	<b><u>FOUNDATIONS</u></b>			
	<u>Brickwork in NFX bricks in class 1 cement mortar, in</u>			
1	One brick wall	m2	31	
	<b><u>SUPERSTRUCTURE</u></b>			
	<u>Brickwork in NFX bricks in class 2 cement mortar, in</u>			
2	Half brick wall	m2	5	
3	One brick wall	m2	42	
	<b>Carried Forward</b>			R
	Section No. 4 Guardhouse Bill No. 3 MASONRY			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
4	One brick wall in beam filling	m2	12
	<u>Brickwork reinforcement</u>		
5	75mm Wide reinforcement built in horizontally	m	24
6	150mm Wide reinforcement built in horizontally	m	234
	<u>Prestressed fabricated lintels</u>		
7	110 x 75mm Lintels in lengths not exceeding 3m	m	11
	<b><u>FACE BRICKWORK</u></b>		
	<u>External Face bricks (prime Cost Amount R 5 500/1000) pointed with flush horizontal and vertical joints</u>		
8	Extra over for face brick work externally	m2	78
	<u>Brick on edge header course copings, sill similar approved clay face brick on edge sill pointed with flush horizontal and vertical joints</u>		
9	180mm Wide sill set sloping and slightly projecting	m	311
	<b><u>NUTEC-CEMENT/FIBRE-CEMENT WINDOW SILLS</u></b>		
	<u>Natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc</u>		
10	15 x 150mm Wide sills set flat and slightly projecting	m	2
<b>Carried Forward to Summary of Section No. 4</b>			R
Section No. 4			
Guardhouse			
Bill No. 3			
MASONRY			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO 4</u></b>			
	<b><u>BILL NO. 4</u></b>			
	<b><u>WATERPROOFING</u></b>			
	<b><u>STANDARD PREAMBLES</u></b>			
	The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill			
	-----			
	<b><u>DAMP PROOFING OF WALLS AND FLOORS</u></b>			
	<u>One layer of 375 micron type B black polyethylene sheeting dampproof course with 200mm laps</u>			
1	In walls	m2	4	
	<u>One layer of 250 micron green polyethylene sheeting complying with SANS 952, Type C in widest practicable widths with all joints lapped and sealed with pressure sensitive tape jointing</u>			
2	Under surface beds	m2	26	
	<b><u>WATERPROOFING TO ROOFS, BASEMENTS, ETC</u></b>			
	<b><u>Two layer "Derbigum SP4" waterproofing membrane sealed by means of "torchfusion" or "Coldbond 90" adhesive with 75mm side laps and 100mm end laps, laid under a ten-year guarantee, to receive paint or stone protection (elsewhere)</u></b>			
3	On roof slabs	m2	30	
	<b><u>JOINT SEALANTS, ETC</u></b>			
	<u>Polysulphide jointing compound including backing cord, bond breaker, primer, etc.</u>			
4	10 x 10mm In isolation joints in top of surface bed including raking out expansion joint filler as necessary	m	7	
	<b>Carried Forward</b>			R
	Section No. 4 Guardhouse Bill No. 4 WATERPROOFING			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

	<b>Brought Forward</b>			R
5	3 x 30mm In saw cut joints in floors	m	7	
<p align="center"><b>Carried Forward to Summary of Section No. 4</b></p> <p>Section No. 4 Guardhouse Bill No. 4 WATERPROOFING</p>				R



Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO 4</u></b></p> <p><b><u>BILL NO. 6</u></b></p> <p><b><u>CARPENTRY AND JOINERY</u></b></p> <p><b><u>STANDARD PREAMBLES</u></b></p> <p>The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill</p> <p><b><u>Particle board:</u></b></p> <p>Particle board shall comply with the following specifications:</p> <p>a) SABS 1300 Particle board: exterior and flooring type</p> <p>b) SABS 1301 Particle board: interior type</p> <p><b><u>Joinery:</u></b></p> <p>Descriptions of frames shall be deemed to include frames, transomes, mullions, rails, etc</p> <p>Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes</p> <p><b><u>Fixing</u></b></p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete</p> <p><b><u>Decorative laminate finish:</u></b></p> <p>Laminate finish shall be glued under pressure. Edge strips shall be butt jointed at junctions with adjacent similar finish</p> <p align="center">-----</p> <p><b><u>DOORS, ETC</u></b></p> <p><u>Solid-core masonite doors with hardwood edge coverstrips both sides</u></p>			
1	40mm Door 813 x 2032mm high (D01 and 02)	No	2	
	<b>Carried Forward to Summary of Section No. 4</b>			R
	Section No. 4 Guardhouse Bill No. 5 CARPENTRY AND JOINERY			

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO 4</u></b></p> <p><b><u>BILL NO. 7</u></b></p> <p><b><u>CEILING AND PARTITIONS</u></b></p> <p><b><u>STANDARD PREAMBLES</u></b></p> <p>The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill</p> <p><b><u>Descriptions</u></b></p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or 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 600mm centres, and where described as "bolted" the bolts have been given elsewhere.</p> <p align="center">-----</p> <p><b><u>NAILED UP CEILINGS</u></b></p> <p><b><u>CEILINGS ETC</u></b></p> <p><b><u>SUSPENDED CEILINGS</u></b></p> <p><b><u>CLEAR PINE CEILING BOARDS</u></b></p> <p><u>220 x 22mm Thick clear pine T &amp; G ceiling board, manufactured in accordance with SANS 9001 : 200, Fixed on pre-painted exposed tee suspension system including main and cross tees necessary hangers, grids etc</u></p>			
1	<p>Ceilings suspended not exceeding 1m below concrete soffits</p>	m2	30	
	<p><b>Carried Forward</b></p>			R
	<p>Section No. 4 Guardhouse Bill No. 6 CEILINGS, PARTITIONS ETC</p>			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
	<u>One coat 3:1 Cement plaster to concrete slab/beams worked to a smooth surface with a steel trowel. Prepare and clean. Apply one coat approved undercoat and Two coats approved interior "ACRLIC PVA"Paint.</u>		
2	Ceilings to soffits of slabs and beams etc.	m2	30
3	75mm Coved cornices	m	21
	<u>"Aerolite" insulation</u>		
4	75mm Insulation closely fitted and laid on top of brandering between roof timbers etc	m2	29
<b>Carried Forward to Summary of Section No. 4</b>			R
Section No. 4			
Guardhouse			
Bill No. 6			
CEILINGS, PARTITIONS ETC			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO 4</u></b>			
	<b><u>BILL NO. 8</u></b>			
	<b><u>IRONMONGERY</u></b>			
	<b><u>STANDARD PREAMBLES</u></b>			
	The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill			
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>			
	<b><u>Finishes to ironmongery</u></b>			
	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 Anodized silver AB Anodized bronze AG Anodized gold ABL Anodized black PB Polished brass PL Polished and lacquered PT Epoxy coated SD Sanded			
	-----			
	<b><u>HINGES, BOLTS, ETC</u></b>			
	<u>"Howick" or similar approved</u>			
1	100 x 75 brass butt hinges (Code H036R) with double nylon washers	No	6	
	<u>"Q.S Stainless Steel " or similar approved</u>			
2	Thumb lock and indicator code QS4406 / QS4410	No	1	
3	Door stop code QS4421	No	1	
	<b><u>LOCKS</u></b>			
	<u>"DCLSA" or similar approved</u>			
4	Cylinder sash lock 325/51 with chrome plated steel forend with 66mm non master keyed double cylinder	No	1	
	<b>Carried Forward</b>			R
	Section No. 4 Guardhouse Bill No. 7 IRONMONGERY			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Brought Forward			R
<b><u>HANDLES</u></b>			
<u>"DCLSA" or similar approved</u>			
5	Solid venere zinc lever furniture door handle in satin chrome finish	Pairs	1.0
6	Push Plate and Pull handle code 048-160	No	1
<u>"Union"</u>			
7	"SS5023-304W" 1,2mm stainless steel push plate size 152 x 228mm high fixed to timber	No	2
<b><u>DOOR CLOSERS</u></b>			
<u>"Dorma" or similar approved</u>			
8	TS71 Silver door closer	No	1
<b><u>VERTICAL BLINDS (PROVISIONAL)</u></b>			
<u>"Dickson" or other equal and approved Free hanging vertical louvre drape system for soffit fixing, complete with anodised aluminium rails, end caps, runners, 127mm wide non fade fabric vanes, controls, etc and fixing to brickwork</u>			
9	Unit for window size 600 x 600mm high	No	3
<b>Carried Forward to Summary of Section No. 4</b>			R
Section No. 4			
Guardhouse			
Bill No. 7			
IRONMONGERY			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO 4</u></b>			
	<b><u>BILL NO. 9</u></b>			
	<b><u>METALWORK</u></b>			
	<b><u>STANDARD PREAMBLES</u></b>			
	The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill			
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	<b><u>HOT DIP GALVANIZED PRESSED STEEL DOOR FRAMES</u></b>			
	<u>"Bitcon" or other equal and approved 1,6mm Double rebated frames suitable for half brick walls</u>			
1	Frame for door size, 813 x 2032mm high (D02)	No	1	
	<u>"Bitcon" or other equal and approved 1,6mm Double rebated frames suitable for one brick walls</u>			
2	Frame for door 813 x 2032mm high (D01)	No	1	
	<b><u>ALUMINIUM LOUVRES</u></b>			
	<u>Approved "Z Profile" shape louvre blade panes fixed to 50mm wide powder coated aluminium fixed panel frame with bird guard secondary frame fitted internally to structural frame including wiremesh for bird protection in strict accordance with manufacturers instructions</u>			
3	Manual operated louver overall size 600 x 600mm high as detailed on the Architects Window schedule	No	2	
	<b><u>STEEL DOOR</u></b>			
	<u>Note: The rates for steel doors, wall safes and ventilators shall include for fixing in position complete</u>			
4	1750 x 2500mm high steel door opening with steel louvred ventilation openings over atleast 60% of the door area as per engineer's details, make provision for a night latch and padlock	No	2	
	<b>Carried Forward</b>			R
	Section No. 4 Guardhouse Bill No. 8 METALWORK			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<p><u>Note:</u></p> <p>Tenderers are referred to the Architect's window and door schedules bound to the back of these bills of quantities for tender purposes.</p> <p><b><u>PURPOSE MADE ALUMINIUM WINDOWS, ETC.</u></b></p> <p><u>47.3 x 40mm Natural anodised aluminium windows glazed with and including a combination of 6.38mm thick clear safety and clear glass as described below.</u>  <u>Contractors are strongly advised to refer to the Architects window schedule attached to the tender document when pricing this section</u></p>			
5	Window size 532 x 563mm high in opening panel glazed with 6.38mm thick clear glass complete with 6 No. 12 x 12 x 600mm long Aluminium burglar bars fixed to frame on the opening panels as detailed on the attached window schedule (W03)	No	3
6	Window size 1498 x 1198mm high top hung panel glazed with 6.38mm thick clear glass (W1)	No	1
<b>Carried Forward to Summary of Section No. 4</b>			R
Section No. 4 Guardhouse Bill No. 8 METALWORK			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO 4</u></b>			
	<b><u>BILL NO. 10</u></b>			
	<b><u>PLASTERING</u></b>			
	<b><u>STANDARD PREAMBLES</u></b>			
	The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill			
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	<b><u>SCREEDS</u></b>			
	<u>Screeds on concrete</u>			
1	23mm Thick on floors	m2	8	
	<b><u>INTERNAL PLASTER</u></b>			
	<u>One coat 3:1 cement plaster on brick walls</u>			
2	On walls	m2	43	
3	On narrow widths	m2	2	
	<b>Carried Forward to Summary of Section No. 4</b>			
	Section No. 4			
	Guardhouse			
	Bill No. 9			
	PLASTERING			
				R



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO 4</u></b>			
	<b><u>BILL NO. 11</u></b>			
	<b><u>TILING</u></b>			
	<b><u>STANDARD PREAMBLES</u></b>			
	The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill			
	-----			
	<b><u>FLOOR TILING</u></b>			
	<u>"Union Tiles" or similar approved Porcelain floor tiles fixed with TAL tile adhesive to screed (screed elsewhere) with joints continuous in both directions and grouted with TAL tile grout</u>			
1	Size 600 x 600 x 8mm thick on internal floors and landings	m2	30	
	<u>Ceramic Tile skirting</u>			
2	100mm high Porcelain tile skirting	m	15	
	<b><u>WALL TILING</u></b>			
	<u>"Johnson" or similar approved glazed Ceramic wall tiles fixed with TAL tile adhesive to plaster (plaster elsewhere) and joints gouted with TAL tile grout</u>			
3	On walls in isolated panels, splashbacks, etc	m2	1	
	<b>Carried Forward to Summary of Section No. 4</b>			
	Section No. 4			
	Guardhouse			
	Bill No. 10			
	TILING			
				R

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO 4</u></b></p> <p><b><u>BILL NO. 12</u></b></p> <p><b><u>PLUMBING AND DRAINAGE (PROVISIONAL)</u></b></p> <p>The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>Reducing fittings</u></b></p> <p>Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc., will be entertained</p> <p><b><u>Flush pans</u></b></p> <p>Flush pans shall have straight or side outlets and "P" or "S" traps as necessary</p> <p>Stainless steel basins, sinks, wash troughs, urinals, etc</p> <p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable</p> <p><b><u>Waste unions</u></b></p> <p>Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings</p> <p>-----</p> <p><b><u>SOIL DRAINAGE</u></b></p> <p><u>uPVC pipes</u></p> <p>110mm Pipes vertically or ramped to cleaning eyes etc (no excavation)</p>			
1		m	2	
	<p style="text-align: right;"><b>Carried Forward</b></p> <p>Section No. 4 Guardhouse Bill No. 11 PLUMBING AND DRAINAGE (PROVISIONAL)</p>		R	

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>				R
<u>Extra over heavy duty uPVC pipes for fittings</u>				
2	110mm Bend	No	2	
3	110mm Junction	No	2	
4	110mm Access pipe	No	1	
5	110mm Access bend	No	2	
6	110mm Access junction	No	1	
<u>PVC gulleys</u>				
7	110mm Gully not exceeding 1000mm deep, formed of trap, gully head with grating and length as necessary with one vertical inlet and encase in concrete	No	1	
8	uPVC cleaning eye fitted to end of 100mm earthenware pipe with 300 x 300mm cast iron cover and frame placed over cleaning eye including concrete surround finished smooth	No	1	
9	Extra over 100mm uPVC pipe for 100mm junction with I.E	No	1	
10	100mm uPVC pipe, raking or vertical to cleaning eye	m	1	
<u>Sundries</u>				
11	100mm "PVC" cleaning eye	No	1	
12	Concrete encasing to 110mm horizontal pipe	m	1	
13	Testing soil drainage system		Item	
<b><u>SANITARY FITTINGS</u></b>				
<u>"Vaal" or other equal and approved</u>				
14	Code 772863 "Tuscany" close coupled 90 degrees outlet closed rim washdown pan (code 772800) and matching 7 Litre pushbutton top dual flush cirsten complete with purpose-made wooden seat (code 8515Z0)	No	1	
15	Batam Cloakroom white wash hand basin size 455 x 290 code 7030 fitted to wall with and including 2 x 10mm fixing bolts	No	1	
<b>Carried Forward</b>				R
Section No. 4 Guardhouse Bill No. 11 PLUMBING AND DRAINAGE (PROVISIONAL)				

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<b><u>WASTE UNIONS, ETC</u></b>			
16	Chrome plated 32mm Basin waste union	No	1
<b><u>TRAPS ETC</u></b>			
17	32 x 40mm Chromium plated bottle trap with 75mm deep seal	No	1
<b><u>TAPS, VALVES, ETC</u></b>			
18	Xena square pattern pillar tap chrome plated (code XE 214 - 15) with streamline outlet and flange backnut	No	2
<b><u>SANITARY PLUMBING</u></b>			
<u>uPVC pipes</u>			
19	110mm Pipes	m	3
20	50mm Pipes	m	3
21	50mm Pipes chased into brick walls	m	2
<u>Extra over uPVC pipes for fittings</u>			
22	50mm Bend	No	2
23	110mm Bend	No	4
24	50mm Access bend	No	2
25	110mm Access bend	No	1
26	50mm Junction	No	2
27	110mm Junction	No	2
28	50mm Access junction	No	1
29	110mm Access junction	No	1
30	110mm Two-way vent valve	No	1
31	110mm Pan connector	No	1
<b>Carried Forward</b>			R
Section No. 4 Guardhouse Bill No. 11 PLUMBING AND DRAINAGE (PROVISIONAL)			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		<b>Brought Forward</b>			R
	<b><u>Sundries</u></b>				
32	Testing waste pipe system			Item	
	<b><u>WATER SUPPLIES</u></b>				
	<b><u>Class "O" copper pipes:</u></b>				
33	15mm Pipes	m	5		
34	22mm Pipes	m	1		
	<b><u>Extra over class "O" copper pipes for capillary fittings</u></b>				
35	15mm Fittings	No	4		
36	22mm Fittings	No	3		
	<b><u>Copper flexible service pipes</u></b>				
37	15mm Service pipe 340mm girth	No	1		
	<b><u>Sundries</u></b>				
38	20mm Full way stop cock	No	1		
	<b><u>TESTING</u></b>				
39	Testing water pipe system			Item	
	<b><u>WATER SUPPLIES TO FIRE APPLIANCES</u></b>				
	<b><u>Galvanized steel pipes</u></b>				
40	25mm Pipes	m	3		
	<b><u>Extra over galvanized steel pipes for steel fittings</u></b>				
41	25mm Fitting	No	3		
	<b><u>FIRE APPLIANCES, ETC</u></b>				
42	9kg DCP fire extinguisher fixed to wall on and including painted timber back board	No	1		
	<b>Carried Forward to Summary of Section No. 4</b>				R
	Section No. 4				
	Guardhouse				
	Bill No. 11				
	PLUMBING AND DRAINAGE (PROVISIONAL)				

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO 4</u></b></p> <p><b><u>BILL NO. 13</u></b></p> <p><b><u>GLAZING</u></b></p> <p><b><u>STANDARD PREAMBLES</u></b></p> <p>The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill</p> <p align="center">-----</p> <p><b><u>MIRRORS, ETC</u></b></p> <p><u>6mm Silvered float glass copper backed mirrors with polished edges fixed to walls with and including CP screw caps over screw heads.</u></p>			
1	<p>Straight edged Mirror size 450 x 900mm high fixed to walls 4 No. with dome cap screws</p>	No	1	
	<p><b>Carried Forward to Summary of Section No. 4</b></p>			R
	<p>Section No. 4 Guardhouse Bill No. 12 GLAZING</p>			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO 4</u></b>			
	<b><u>BILL NO. 14</u></b>			
	<b><u>PAINTWORK</u></b>			
	<b><u>STANDARD PREAMBLES</u></b>			
	The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill			
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	<b><u>ON PLASTER INTERNALLY</u></b>			
	<u>One coat "Plascon" merit plaster primer, two coats "plascon" double velvet pure acrylic paint or similar approved</u>			
1	On internal walls	m2	43	
2	On internal walls not exceeding 300mm wide	m	9	
	<b><u>ON FIBRE CEMENT BOARD</u></b>			
	<u>Universal undercoat and two coats plascon acrylic emulsion paint</u>			
3	On internal ceilings	m2	8	
	<b><u>ON METAL</u></b>			
	<u>One coat Namel coat zinc chromate metal primer, one coat merit universal undercoat and two coats gloss enamel "Dulux" - tawny mink on steel</u>			
4	On door frames	m2	3	
	<b><u>ON INTERNAL WOOD</u></b>			
	<u>One coat wood Primer and apply two coats "Dulux" eggshell enamel or similar approved applied in strict accordance with manufacturers specifications</u>			
5	On doors	m2	7	
	<b>Carried Forward to Summary of Section No. 4</b>			
	Section No. 4 Guardhouse Bill No. 13 PAINTWORK		R	

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Bill No	Section No. 4 Guardhouse	Page No	Amount
	<b><u>SECTION SUMMARY - Guardhouse</u></b>		
1	EARTHWORKS (PROVISIONAL)	185	
2	CONCRETE, FORMWORK AND REINFORCEMENT	188	
3	MASONRY	190	
4	WATERPROOFING	192	
5	CARPENTRY AND JOINERY	193	
6	CEILINGS, PARTITIONS ETC	195	
7	IRONMONGERY	197	
8	METALWORK	199	
9	PLASTERING	200	
10	TILING	201	
11	PLUMBING AND DRAINAGE (PROVISIONAL)	205	
12	GLAZING	206	
13	PAINTWORK	207	
	<b>Carried to Final Summary</b>		R
	Section No. 4 Guardhouse		



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO 5</u></b>			
	<b><u>BILL NO. 1</u></b>			
	<b><u>MASS EARTHWORK (PROVISIONAL)</u></b>			
	<b><u>STANDARD PREAMBLES</u></b>			
	The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill			
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	<b><u>EARTHWORKS</u></b>			
	<u>Site clearance</u>			
1	Clear area of the site to be built upon including digging up and removing rubbish, debris, vegetation, hedges, boulders, shrubs and trees with trunk not exceeding 200mm girth	m2	3 009	
	<u>Bulk Excavations</u>			
2	Open face excavation in earth to reduce levels	m3	4 514	
3	Extra over all excavations for carting away surplus material from excavations and/or from stockpiles on site to a dumping site to be located by the Contractor	m3	3 912	
	<u>Extra over trench and hole excavations in earth for excavation in</u>			
4	Soft rock	m3	675	
5	Hard rock	m3	150	
	<u>Filling, etc.</u>			
	<u>Extra over for importation of materials from commercial sources or from borrow pits</u>			
6	From Commercial Source	m3	3 912	
	<b>Carried Forward</b>			R
	Section No. 5 External works Bill No. 1 MASS EARTHWORKS			



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO 5</u></b>			
	<b><u>BILL NO. 3</u></b>			
	<b><u>WATER RETICULATION (PROVISIONAL)</u></b>			
	<b><u>STANDARD PREAMBLES</u></b>			
	The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill			
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	<b><u>WATER SUPPLIES</u></b>			
	<u>Supply, lay, joint, bed on class C bedding, test and disinfect water supply mains to SABS 966</u>			
1	25mm dia HDPE class 16	m	15	
2	32mm dia HDPE class 16	m	15	
3	50mm dia HDPE class 16	m	15	
4	90mm dia UPVC class 12	m	18	
5	110 mm dia UPVC class 12	m	280	
	<b><u>VALVES</u></b>			
	<u>Line valve assemblies to SABS 664. Extra-over item 9.1 for supplying, installing, bedding and testing line valve assemblies in uPVC mains as per the drawings complete. Cutting of pipes and couplings included.</u>			
6	25mm dia	m	15	
7	32mm dia	m	15	
8		m	15	
9	90mm dia	m	18	
10	110mm dia	m	7	
	<b><u>FITTINGS AND SPECIALS</u></b>			
	<b>Carried Forward</b>			R
	Section No. 5 External works Bill No. 2 WATER RETICULTATION (PROVISIONAL)			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<u>Extra-over for supplying, installing, bedding and testing in uPVC mains the following fittings and specials complete. Cutting of pipes and couplings included.uPVC long radius class 9 pressure bends</u>			
11	25mm dia 90°	No	2
12	32mm dia 45°	No	2
13	50mm dia 90°	No	2
14	110mm dia 45°	No	6
15	110mm dia 90°	No	5
<u>Cast iron plain ended tees to SABS 546Where CI reducing tees require a male/female CI reducer as one of the components, the reducer should be included in the price of the reducing tee</u>			
16	50 x 32mm	No	3
17	110 x 50mm	No	3
18	110 x 110mm	No	3
<u>Cast iron plain ended tees to SABS 546Where CI reducing tees require a male/female CI reducer as one of the components, the reducer should be included in the price of the reducing tee</u>			
19	110 x 90mm	No	2
<u>Cast iron plain ended reducers to SABS 546</u>			
20	110 x 90mm	No	2
<u>Cast iron plain ended end caps</u>			
21	110mm dia	No	2
<b><u>Taps, valves, etc</u></b>			
22	20mm Brass garden tap with hose connection	No	5
23	25mm 1001/125RB full way gate valve	No	3
<b>Carried Forward</b>			R
Section No. 5 External works Bill No. 2 WATER RETICULTATION (PROVISIONAL)			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R	
<b><u>Sundries</u></b>				
24	Extra over excavation in earth for pipe trenches, chambers, etc. for excavation in "soft rock"	m3	725	
25	Extra over excavation in earth for pipe trenches, chambers, etc. for excavation in "hard rock"	m3	4	
26	Class C (15 MPa/20) concrete in thrust blocks at bends, tees, etc. including necessary extra excavation, formwork, etc	m3	3	
27	150 x 150mm Cast iron stopcock box, including brick chamber below exceeding 500mm and not exceeding 750mm deep internally	No	3	
28	530 x 530mm Valve chamber exceeding 750mm and not exceeding 1000mm deep internally including cover and frame	No	2	
<b><u>Testing</u></b>				
29	Testing water and fire service pipe system		Item	
<b><u>STORAGE WATER TANK</u></b>				
<u>Water Tank etc.</u>				
30	Supply and install SABS approved 5 KI water storage tanks complete with all necessary fittings.	No	2.00	
<u>Tank stands</u>				
31	5000L JOJO tank with 5m steel stand and booster pump and steel cage	No	2	
<u>Booster Pump</u>				
32	Supply and install 0.75KW ((25/s), 230W Pressure booster pump	No	1	
33	Allow a provisional Amount R5 000 for Booster Pump Cage to Engineers details		Item	5 000.00
34	Allow a provisional Amount of R5 000 Electrical Conection of booster pump		Item	5 000.00
<b>Carried Forward</b>			R	
Section No. 5 External works Bill No. 2 WATER RETICULTATION (PROVISIONAL)				

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Brought Forward			R
	<u>Valves</u>		
35	Float valve in Water storage tank	No 2	
	<b><u>BULK WATER METER</u></b>		
	<u>Double flanged, Kent Helix 4000 cold water meter</u>		
36	75mm	No 1	
	<b><u>Drilling and Equipping borehole</u></b>		
37	Allow the sum of R350 000.00 for drilling and equipping borehole	Item	350 000.00
	<b><u>MUNICIPAL CONNECTIONS</u></b>		
	<u>Connections</u>		
38	Allow the amount of R10 000 (Ten Thousand Rand) for municipal connections	Item	10 000.00
39	Allow for Profit on above if required	Item	
40	Allow for Attendance on above if required	Item	
<b>Carried Forward to Summary of Section No. 5</b>			
Section No. 5			
External works			
Bill No. 2			
WATER RETICULTATION (PROVISIONAL)			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO 5</u></b>			
	<b><u>BILL NO. 4</u></b>			
	<b><u>SEWERS (PROVISIONAL)</u></b>			
	<b><u>STANDARD PREAMBLES</u></b>			
	The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill			
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	<b><u>SOIL DRAINAGE</u></b>			
	<u>uPVC pipes class 34 pipes with flexible joint</u>			
1	110mm Pipes laid in and including trenches not exceeding 1.5m deep, bedding, backfilling, compaction and disposal of excavated material	m	389	
	<u>Inspection chambers (covers elsewhere)</u>			
2	Inspection chamber 600 x 600mm and not exceeding 750mm deep internally	No	6	
3	Inspection chamber exceeding 1 500mm and not exceeding 1 750mm deep internally	No	6	
	<u>Testing</u>			
4	Testing drainage pipe system		Item	
	<u>Extra over heavy duty uPVC pipes for fittings</u>			
	<u>Class 16 uPVC high pressure</u>			
5	110mm Pipes laid in and including trenches not exceeding 1.0m deep, bedding, backfilling, compaction and disposal of excavated material	m	343	
	<u>Class 10 HDPE type IV pipes</u>			
6	50mm pipes laid in and including trenches not exceeding 1m deep	m	220	
7	Connection onto water supply and testing installation	No	1	
	<b>Carried Forward to Summary of Section No. 5</b>			R
	Section No. 5 External works Bill No. 3 SEWER RETICULATION			





**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
2	Triangular shaped concrete spill basin size 1080mm at head, 2440mm at base end and 1209mm along the sides, formed of 200mm thick concrete base with concrete upstand size 200 x 200mm high along two sides and 200 x 200mm footing along base end including all necessary excavation, formwork and backfilling, the top of the base inlaid with eleven hard burnt clay bricks protruding 55mm above the surface of the concrete and loose stones of 150 to 200mm diameter placed at the base of the spill basin for a width of 500mm	No	8
<b><u>THE FOLLOWING IN BOX CULVERT</u></b>			
<u>Excavation in earth not exceeding 2m deep</u>			
3	Trenches	m3	54
<u>Risk of collapse of excavations</u>			
4	Sides of trench and hole excavations not exceeding 1,5m deep	m2	42
<u>Extra over all excavations for carting away</u>			
5	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	54
<u>25MPa/20mm concrete</u>			
6	Foundations	m3	4
<u>High tensile steel reinforcement to structural concrete work (including spacers)</u>			
7	12mm Diameter bars	t	0.91
<u>Precast concrete culverts</u>			
8	Precast concrete rectangular culvert size 1 200 x 600mm high	m	12
<u>Brickwork in NFX bricks in class 2 cement mortar, in</u>			
9	One brick wall	m2	5
<u>Brickwork reinforcement</u>			
10	150mm Wide reinforcement built in horizontally	m	14
<b>Carried Forward</b>			R
Section No. 5 External works Bill No. 4 STORMWATER DRAINAGE (PROVISIONAL)			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
	<u>One coat 3:1 textured cement plaster on brick walls</u>		
11	On walls	m2	5
	<u>Prepare, stop and paint 1 UC56 "Plascon" or similar approved plaster primer and two coats "wall to wall" or similar approved acrylic wall paint</u>		
12	On external walls	m2	18
<b>Carried Forward to Summary of Section No. 5</b>			R
Section No. 5			
External works			
Bill No. 4			
STORMWATER DRAINAGE (PROVISIONAL)			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION NO 5</u></b></p> <p><b><u>BILL NO 6</u></b></p> <p><b><u>PAVING AND ROAD WORKS</u></b> <b><u>(PROVISIONAL)</u></b></p> <p><b><u>STANDARD PREAMBLES</u></b></p> <p>The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill</p> <p><b><u>SUPPLEMENTARY PREAMBLES</u></b></p> <p><b><u>The following Standardized Specifications form part of this Bill</u></b></p> <p>SABS 1200B - (Bedding pipes, etc)            SABS 1200C - (Site clearance)            SABS 1200DA - (Earthworks (small works))            SABS 1200DM - (Earthworks (roads, sub grade))            SABS 1200GA - (Concrete (small works))            SABS 1200M - (Roads (general))            SABS 1200MK - (Kerbstones and channels)            SABS 1200MM - (Ancillary road works)</p> <p><b><u>Measurement and payment</u></b></p> <p>All measurement and payment clauses as prescribed in the above Standardized Specifications shall not apply to the work as set out in this Bill.</p> <p><b><u>General</u></b></p> <p>These Specifications were drawn up to cover all activities normally encountered on any of the above mentioned civil engineering work and details may therefore be encountered which will not apply to this Contract.</p> <p>These specifications are not issued with this document but are obtainable from the South African Bureau of Standards, Private Bag X191, Pretoria 0001.</p>			
	<b>Carried Forward</b>			R
	<p>Section No. 5            External works            Bill No. 5            INTERNAL ROAD AND PARKING</p>			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
<b><u>DESCRIPTIONS</u></b>			
The Tenderer is referred to the previous Section and the previous and successive Bills in this Section for preambles and full descriptions of materials and items described in this Bill, which will apply equally to the work in this Bill unless otherwise described			
<b><u>MAINTENANCE PERIOD</u></b>			
The maintenance period for the following work shall be 12 calender months			
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<b><u>ROADS, PARKING, WALKWAYS AND APRONS</u></b>			
<u>Site clearance</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	2 309
2	Stripping average 150mm thick layer of top soil and stockpiling on site	m2	2 309
<u>Earth filling of G5 material supplied by the Contractor</u>			
3	Base course under parking areas etc and compacted to 95% Mod AASHTO density	m3	2 032
4	River Sand	m3	120
<u>Compaction of surfaces</u>			
5	Compaction of ground surfaces under pavings etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density	m2	2 309
<u>Weed killer</u>			
6	Under paving etc	m2	2 309
<u>Extra over all excavations for carting away</u>			
7	Surplus material from stock piles on site to a dumping site to be located by the contractor	m3	487
<b>Carried Forward</b>			R
Section No. 5 External works Bill No. 5 INTERNAL ROAD AND PARKING			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>				R
	<u>Prescribed density tests on filling</u>			
8	"Modified AASHTO Density" test	No	200	
	<u>80mm Type S-A interlocking paving laid in herringbone bond, wet crushing strength of 25 Mpa on 20mm (thickness after final compaction) clean river sand with sand swept into joints (preparation of ground or filling elsewhere)</u>			
9	Interlocking Paving to parking areas, etc to falls	m2	2 309	
	<u>Precast concrete finished smooth on exposed surfaces, including bedding, jointing and pointing</u>			
10	300 x 150 x 380mm high semi-mountable kerbs (SABS FIG 8C) with 180 x 75mm high unreinforced concrete bedding and 75 x 275mm high unreinforced concrete hunching along the kerb, including excavation, backfilling, etc	m	437	
	<u>Road marking and signs to interlocking paving</u>			
11	100mm Wide line	m	55	
12	Disabled parking sign	No	2	
13	Standard "STOP" sign	No	2	
	<u>Standard road sign with standard 50mm diameter galvanized mild steel fixing post bedded into and including bases, including any necessary excavation, mass concrete, etc.</u>			
14	610mm "STOP" sign	No	1	
15	610mm "DISABLED" sign	No	2	
	<b><u>THE FOLLOWING IN EDGE BEAMS</u></b>			
	<u>Excavation in earth not exceeding 2m deep</u>			
16	Trenches	m3	3	
	<u>Risk of collapse of excavations</u>			
17	Sides of trench and hole excavations not exceeding 1,5m deep	m2	6	
	<b>Carried Forward</b>			R
	Section No. 5 External works Bill No. 5 INTERNAL ROAD AND PARKING			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>			R
	<u>Extra over all excavations for carting away</u>		
18	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	2
	<u>25MPa/19mm concrete</u>		
19	Edge beams	m3	2
	<u>High tensile steel reinforcement to structural concrete work (including spacers)</u>		
20	10mm Diameter bars	t	0.03
<b>Carried Forward to Summary of Section No. 5</b>			R
Section No. 5			
External works			
Bill No. 5			
INTERNAL ROAD AND PARKING			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO 5</u></b>			
	<b><u>BILL NO. 8</u></b>			
	<b><u>FENCING (PROVISIONAL)</u></b>			
	<b><u>STANDARD PREAMBLES</u></b>			
	The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill			
	<b><u>DESCRIPTIONS</u></b>			
	The Tenderer is referred to the previous Section and the previous and successive Bills in this Section for preambles and full descriptions of materials and items described in this Bill, which will apply equally to the work in this Bill unless otherwise described			
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	<b><u>EARTHWORKS</u></b>			
	<u>Excavation in earth not exceeding 2m deep</u>			
1	Trenches	m3	18	
	<u>Risk of collapse of excavations</u>			
2	Sides of trench and hole excavations not exceeding 1,5m deep	m2	105	
	<b><u>REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b>			
	<b><u>25MPa/19mm concrete</u></b>			
3	Strip footings	m3	8	
	<b><u>MASONRY</u></b>			
	<b><u>CLEARVU OR SIMILAR APPROVED SECURITY BARRIER FENCING SYSTEM</u></b>			
	<b>Carried Forward</b>			
	Section No. 5 External works Bill No. 6 FENCING			R

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>				R
	<u>Welded steel palisade security fencing with posts encased in concrete footings</u>			
4	ClearView fencing (Type A) complete with posts, fencing panel, brickwork, plastering , painting etc as per drawings	m	520	
	<b><u>Gates, Screens Etc</u></b>			
5	Purpose made sliding gate 6 000 x 2 440mm high overall, the outer frame of 75 x 75 x 5mm square tubing and 50 x 50 x 2.5mm welded mesh welded to frame work, complete with industrial type roller wheels rolling on ground track and mechanical operating mechanism and padbolt	No	1	
6	Swing gate 1500mm x 2400mm high including 3mm diameter Galvanized wire Mesh with aperture sizes (centres) of 76.2mm x 12.7mm firmly fixed to 50mm x 75mm x 3mm hollow steel tube frame surround, suspended on adjacent posts (ditto) with suitable bullet hinges	No	1	
<b>Carried Forward to Summary of Section No. 5</b>				
Section No. 5 External works Bill No. 6 FENCING				R



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<b><u>SECTION NO 5</u></b>			
	<b><u>BILL NO. 9</u></b>			
	<b><u>CARPORT (PROVISIONAL)</u></b>			
	<b><u>STANDARD PREAMBLES</u></b>			
	The contractor is referred to the Model Preambles for Trades (2008 edition) as issued the Association of South African Quantity Surveyors before pricing this bill			
	<b><u>DESCRIPTIONS</u></b>			
	The Tenderer is referred to the previous Section and the previous and successive Bills in this Section for preambles and full descriptions of materials and items described in this Bill, which will apply equally to the work in this Bill unless otherwise described			
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	<b><u>EARTHWORKS</u></b>			
	<u>Excavation in earth not exceeding 2m deep</u>			
1	Holes	m3	8	
	<u>Risk of collapse of excavations</u>			
2	Sides of trench and hole excavations not exceeding 1,5m deep	m2	36	
	<u>Extra over all excavations for carting away</u>			
3	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	4	
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 90% Mod AASHTO density</u>			
4	In trenches, holes, etc.	m3	8	
	<u>25MPa/19mm Concrete</u>			
5	Bases	m3	10	
	<b>Carried Forward</b>			R
	Section No. 5 External works Bill No. 7 CARPORT (PROVISIONAL)			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

<b>Brought Forward</b>				R
6	Columns in foundations (Provisional)	m3	1	
	<u>Rough formwork to sides</u>			
7	Rectangular stub columns in foundations (Provisional)	m2	2	
	<u>High tensile steel reinforcement to structural concrete work (including spacers)</u>			
8	12mm Diameter bars	t	1.00	
	<u>The following in 2 No. 7500 x 5000mm pre-fabricated shadeport treble unit constructed of tubular mild steel welded and bolted frame</u>			
9	350 x 350 x 6mm Baseplate to columns	No	50	
10	End cap to 219mm diameter steel column	No	50	
11	80 x 80 x 6mm Flat section bracket	No	84	
12	219mm Diameter 3mm thick, hollow section steel column	kg	3 214.80	
13	60mm Diameter 2mm thick, hollow section beam	kg	347.08	
14	51mm Diameter 2mm thick, hollow section support	kg	208.77	
15	48mm Diameter 2mm thick, hollow section arched purlin	kg	721.88	
16	38mm Diameter 2mm thick, hollow section purlin support	kg	338.00	
	<u>0,6mm Kliplok roof sheeting or similar approved, on timber purlins in strict accordance to manufacturers specification on timber roof structure and structural engineers detail</u>			
17	Roof covering with pitch not exceeding 25 degrees	m2	250	
<b>Carried Forward to Summary of Section No. 5</b>				R
Section No. 5				
External works				
Bill No. 7				
CARPORT (PROVISIONAL)				



**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Item No		Quantity	Rate	Amount
	<p><b><u>SECTION 4</u></b></p> <p><b><u>BILL NO. 1</u></b></p> <p><b><u>PROVISIONAL SUMS</u></b></p> <p><b><u>NOTES:</u></b></p> <p>1. The Contractor's attention is drawn specifically to the Principal Building Agreement Clause 20.0 (Nominated Sub-Contractors), Clause 21.0 (Selected Sub-Contractors) and Clause 22 (Work by Others) and to the related Clauses in Section 1, Bill No. 1 - Preliminaries</p> <p>2. The Contractor's attention is drawn also to the definition of attendance on Nominated or Selected Sub-Contractors and of fuel, power and water for commissioning of mechanical and other specialised installations given in the JBCC Preliminaries</p> <p>3. Where special attendance includes the provision of hoisting facilities for a Sub-Contractor then the Contractor shall:-</p> <ul style="list-style-type: none"> <li>* Ensure that the capacities of his hoisting equipment are sufficient to deal with the masses and the quantities of the items to be hoisted,</li> <li>* Schedule the times of availability of the hoisting equipment for each Sub-Contractor,</li> <li>* Provide all necessary personnel to operate the hoisting equipment,</li> </ul> <p>all to enable the Sub-Contractor to execute the hoisting or lowering of his material, etc. using the facilities provided by the Contractor</p> <p><b><u>PROVISIONAL SUMS</u></b></p> <p><b><u>Landscaping</u></b></p>			
1	Provide the sum of R 350 000.00 (three Hundred and Fifty Thousand) for Landscaping		SUM	
2	Profit	Item		
	<b>Carried Forward</b>		R	
	Section No. 6 PROVISIONAL SUMS Bill No. 1 Provisional Sums			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

		<b>Brought Forward</b>		R
3	Allow for general attendance		Item	
	<b><u>ELECTRICAL INSTALLATION</u></b>			
4	Allow R 9 937 061.50 (Nine million Nine hundred and thirty seven thousand and sixty one rands and fifty cents) For Electrical Installation		Item	9 937 061.50
5	Profit			%
6	Attendance			%
	<b><u>MECHANICAL INSTALLATION</u></b>			
7	Allow the sum of R5 253 717.20 for mechanical installation.		Item	5 253 717.20
8	Profit			%
9	Attendance			%
	<b><u>PROFESSIONAL SERVICE PROVIDERS</u></b>			
10	Allow R 2 956 845.51 (Two million nine hundred and fifty six thousand Eight hundred and Forty Five rands and Fifty One cents) For the Appointment of a Professional Service Providers		Item	2 956 845.51
11	Profit			%
12	Attendance			%
	<b>Carried to Final Summary</b>			R
	Section No. 6 PROVISIONAL SUMS Bill No. 1 Provisional Sums			

**CONSTRUCTION OF NKANGALA DISASTER MANAGEMENT CENTRE**

Section No	<u>FINAL SUMMARY</u>	Page No		Amount
1	Preliminaries	111		
2	Main office building	150		
3	Mini Laboratory	182		
4	Guardhouse	208		
5	External works	227		
6	PROVISIONAL SUMS	229		
	SUB-TOTAL		R	
	<b><u>COMMUNITY LIASON OFFICER</u></b>			
	Provide the amount of R 117,000.00 ( One Hundred and Seventeen Thousand Rands Only at R6,500.00/ month ) for the appointment of community liaison officer.	Item		
	SUB-TOTAL		R	
	Add Contingencies @ 10%		R	
	SUB-TOTAL		R	
	Add 5% for escalation in cost		R	
	SUB-TOTAL		R	
	Add VAT at the rate of 15%		R	
	SUB-TOTAL		R	
	<b>Carried to Form of Tender</b>		R	