

# GW1 – Rev1

<b>GW1</b> (EB/ASP2/07/18/Z1A)		<b>GE1</b> (EB/ASP2/04/18/Z1A)
<b>HW1</b> EB/ASP2/05/18/Z1A	<b>HS1</b> EB/ASP2/08/18/Z1A	<b>HE1</b> EB/ASP2/06/18/Z1A



## Tender

### PROVISION OF MANUFACTURING FACILITY IN ZONE 1A OF THE ELIDZ

AT THE

**EAST LONDON INDUSTRIAL DEVELOPMENT ZONE**

**CONTRACT NO: EB/ASP2/07/18/Z1A**

**PROVISION OF MANUFACTURING FACILITY IN  
ZONE 1A OF THE ELIDZ**

**ENVELOPE B: FINANCIAL PROPOSAL**

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Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

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Tenderer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_ Employer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_

## **PART C1: AGREEMENTS AND CONTRACT DATA**

## **C1.1 CONTRACT DATA EC**

**C1.1: CONTRACT DATA - EMPLOYER**

	<p>The Conditions of Contract are clauses 1 to 42 of the JBCC series 2000 Principal Building Agreement (Edition 5 of July 2007) prepared by the Joint Building Contracts Committee.</p> <p>Copies of these conditions of contract may be obtained from the Association of South African Quantity Surveyors, Master Builders Association, South African Association of Consulting Engineers, South African Institute of Architects, Association of Construction Project Managers, Building Industries Federation South Africa, South African Property Owners Association or Specialist Engineering Contractors Committee.</p>
	<p><b>Definitions</b></p> <p>The definitions used in this document and the interpretation thereof are as listed in the Principal Building Agreement. The word or phrase of a definition is in bold text and shall bear the meaning assigned to it in the Principal Building Agreement. Where such word or phrase is not highlighted it shall bear the meaning consistent with the context of its use. The listed defined word or phrase does not qualify as a definition where information required to be stated in the contract data has not been provided.</p>
	<p><b>Provision of Contract Data</b></p> <p>Spaces requiring information must be filled in, shown as “not applicable” or deleted but not left blank. Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided, the information should be annexed hereto and cross referenced to the applicable clause of the contract data.</p>
	<p><b>Reference Clauses</b></p> <p>Where relevant the Principal Building Agreement clause applicable to the required information is printed in italics under the Contract Data clause number ie. [27.4.2]</p>
<b>1.0</b>	<b>CONTRACTING AND OTHER PARTIES</b>
1.1 [1.2]	<p>Employer:</p> <p>East London Industrial Development Zone SOC Ltd</p> <p>Postal address:</p> <p>P O BOX 5458 Greenfields East London Tel: (043) 702 8200 Fax: (043) 7028251 Email: gary@elidz.co.za Tax/VAT registration No. 4900 213 598</p> <p>Physical address:</p> <p>Lower Chester Road Sunnyridge East London Code 5201</p>
1.2 [5.1]	<p>Principal Agent</p> <p>MDA Architects</p> <p>Physical address:</p> <p>17 Bonza Bay Road, Beacon Bay, East London Code 5241 Tel: 043 748 1391 Fax: Email: pat@mdaarchitects.co.za</p>
1.3 [5.2]	<p>Agent (1)</p> <p>Project Managers</p> <p>Engineering Advice Services</p> <p>Agent's service:</p>

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

	<b>PROJECT MANAGERS</b>		
	Physical address:		
	73 Heugh Rd, Walmer, Port Elizabeth Code 6070 Tel: 041 581 2421 Fax: 086 683 9899 Email: marcus@easpe.co.za		
1.4 [5.2]	Agent (2)		
	MDA Architects		
	Physical address:		
	17 Bonza Bay Road, Beacon Bay, East London Code 5241 Tel: 043 748 1391 Fax: Email: pat@mdaarchitects.co.za		
	MDA Architects		
	Physical address:		
1.5 [5.2]	Agent (3)		
	Pulana Baxter and Associates		
	Agent's service:		
	QUANTITY SURVEYOR		
	Physical address:		
	30 Chamberlain Rd, Berea, East London Code 5241 Tel: 043 721 0984 Fax: Email: inga@pba.co.za		
1.6 [5.2]	Agent (4)		
	Engineering Advice Services		
	Agent's service:		
	CIVIL ENGINEERS		
	Physical address:		
	73 Heugh Rd, Walmer, Port Elizabeth Code 6070 Tel: 041 581 2421 Fax: 086 683 9899 Email: marcus@easpe.co.za		
1.7 [5.2]	Agent (5)		
	ZNM Civil and Structural Engineers		
	Agent's service:		
	STRUCTURAL ENGINEERS		
	Physical address:		
	8A Bonza Bay Road, Beacon Bay, East London Code 5241 Tel: 087 350 4035 Fax: 086 608 3511 Email: mzukisi@znmeng.co.za		
1.8 [5.2]	Agent (6)		
	Element Consulting Engineers		
	Agent's service:		
	CONSULTING ELECTRICAL ENGINEERS		
	Physical address:		
	9 Pearce St, Berea, East London Code 5241 Tel: 043 726 0074 Fax: 043 726 0600 Email: bdyantyi@eceng.co.za		

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

1.9 [5.2]	Agent (7)	
	Element Consulting Engineers	
	Agent's service:	
	CONSULTING MECHANICAL ENGINEERS	
	Physical address:	
	9 Pearce St, Berea, East London	
	Code	5241
	Tel:	043 726 0074
	Fax:	043 726 0600
	Email:	mheyens@eceng.co.za
1.10 [5.2]	Agent (8)	
	To be appointed	
	Agent's service:	
	SHEQ Consultant	
	Physical address:	
	.....	
	.....	
	Code	.....
	Tel:	.....
	Fax:	.....
	Email:	.....
1.11 [5.2]	Agent (9)	
	To be appointed	
	Agent's service:	
	Environmental Consultant	
	Physical address:	
	.....	
	.....	
	Code	.....
	Tel:	.....
	Fax:	.....
	Email:	.....
1.12 [5.5]	Interest of principal agent or other agents in the project	No
1.12	The principal agent named in 1.3 is responsible for the preparation of the contract data schedule. Failure to complete the contract data schedule in full may result in the tender being disqualified.	
2	<b>CONTRACT AND SITE INFORMATION</b>	
2.1 [1.7]	The law applicable to this agreement shall be that of the	Republic of South Africa
2.2 [1.1]	Works identification:	
	The proposed scope of work comprises the construction of a new Manufacturing Facility IN ZONE 1A OF THE ELIDZ in the ELIDZ. The factory building is approximately 11 162 m <sup>2</sup> while the office complex, staff and utility areas are approximately 1 632 m <sup>2</sup> in size. Covered loading areas are approximately 762 m <sup>2</sup> while hard stand areas are approximately 4 500 m <sup>2</sup> . The works also includes civil installation assistance of tenant supplied and installed bulk Nitrogen and LP Gas installations.	
2.3 [1.1]	Site description:	The site is in Zone1A of the EAST LONDON IDZ (Refer to Envelope A Volume 1 of 2: Technical Specification Part C4 Site Information for detail)
2.4 [15.2.1]	Possession of the site is to be given on:	PROVISIONAL: <b>13 August 2019</b> , Subject to the DoL issuing the Construction Work Permit.
2.5 [15.3]	Period for the commencement of the works after the contractor takes possession of the site: (working days)	1
2.6 [15.4]	Completion of the works in sections is required	Yes

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

[28.0]	Number of sections				4
2.7 [3.3] [31.16.2]	Waiver of the contractor's lien or right of continuing possession is required				Yes
2.8 [16.1]	Defined restrictions to the site area. Where "yes" the specific requirements are described below or detailed in the contract documents:				No
2.9 [16.4]	Geotechnical investigation of the site has been undertaken. Where "yes" results are included in the contract documents.				No
2.10 [16.6]	Existing premises will be occupied. Where "yes" the specific requirements are described below or detailed in the contract documents				No
2.11 [16.7]	Provision of temporary services is required. Where "yes" the specific requirements are described below or detailed in the contract documents				Yes
2.11.1	Water	Option A	Contractor	his cost	
		Option B	Employer	free of charge	
		Option C	Employer	metered (contractor cost)	C
2.11.2	Electricity	Option A	Contractor	his cost	
		Option B	Employer	free of charge	
		Option C	Employer	metered (contractor cost)	C
2.11.3	Telecom	Option A	Contractor	his cost	A
		Option B	Employer	free of charge	
		Option C	Employer	metered (contractor cost)	
2.11.4	Ablutions	Option A	Contractor	his cost	A
		Option B	Employer	free of charge	
2.12 [16.8]	Protection of existing trees and shrubs is required. Where "yes" the specific requirements are described below or detailed in the contract documents				No
3.0	INSURANCES AND SECURITIES				
3.1	Contract works insurance to be effected by the:			(Employer/ Contractor)	Employer
[10.1.1]	For the sum of			(amount)	Contract Sum + 18%
[12.6]	The contractor is responsible, in the case of storm, subsidence, landslide or collapse, earthquake or earth tremor, fire and lightning, theft/ malicious damage, for the deductible of			(amount)	R 25,000
	The contractor is responsible, in all other cases, for the deductible of			(amount)	R 10,000
3.2	Supplementary / Special insurance to be effected by			(Employer/ Contractor)	Employer
[10.1.2]	For the sum of			(amount)	Contract Sum + 18%
[11.1] [11.2] [11.3] [12.6]	The contractor is responsible for the deductible of 0.1% of the Contract Sum with a minimum of R2,500.00 and a maximum of R 25,000.00 per incident.				
3.3	Public liability insurance to be effected by			(Employer/ Contractor)	Joint Names
[10.1.3]	Spread of Fire for the Sum of			(amount)	R 250,000
	All other cases for the Sum of			(amount)	R 20,000,000
[12.6]	The contractor is responsible, in the case of			(amount)	R 25,000

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_



	Damage to Underground Services, for the deductible of				
	The contractor is responsible, in the case of Third Party Damage, for the deductible of			(amount)	R 15,000
3.4 [11.1.1]	Support insurance to be effected by the				Employer
	For the sum of			(amount)	NA
	With a deductible of			(amount)	NA
3.5	Special insurance to be effected by			(Employer/ Contractor)	NA
	Type				
	For the sum of			(amount)	NA
	With a deductible of			(amount)	NA
4.0	PRACTICAL COMPLETION DATES AND PENALTIES				
4.1	For the works as a whole			Date	Penalty Amount
[24.3.1] [30.1] [30.2] [30.3]	The date for practical completion and the penalty per calendar day			NA	NA
4.2 [24.3.1] [28.1]	For the works in sections			Date	Penalty Amount
	The date for practical completion and the penalty per calendar day	Section 1	13 Dec 2019	R 60,000.00	
		Section 2	20 Mar 2020	R 60,000.00	
		Section 3	17 Jun 2020	R 60,000.00	
		Balance	20 Aug 2020	R 60,000.00	
5.0	DOCUMENTS AND GENERAL				
5.1 [3.7]	No of Construction documents to be supplied to the contractor				3
5.2 [3.9]	The priced document may be used as a specification of materials and goods and work methods				No
5.3 [3.10]	The contractor shall provide a schedule of rates				No
5.4 [3.11]	Changes made to JBCC standard documents				Yes
				(Addendum No)	NA
5.5 [3.11]	On acceptance of the tender the priced document is to be submitted within the stated working days			(No. of)	The priced document is to be submitted as part of the tender and returned as part of Envelope B: Financial Proposal
5.6 [22.2]	Work to be undertaken by direct contractors				Yes
5.7 [24.9]	On achievement of practical completion the contractor is to hand over manuals etc. related to the works as listed below:				
	(1)	Electrical Installation	(2)	Access Control Installation	
	(3)	Fire Detection Installation	(4)	Air Conditioning Equipment Installation	
	(5)	Sprinkler Installation	(6)	Dock Levelers	
	(7)	High Speed Doors			

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

5.8	Interim payment certificate to be issued by	(Date of Month)	25 <sup>th</sup> day of the month
<b>6.0</b>	<b>CHANGES MADE TO THE STANDARD JBCC DOCUMENT</b>		
	Note: All changes in detail must be listed below or provided in	(Addendum No)	NA
1.1	The definition of "Bills of Quantities" is amended by replacing it with the following:  "Bills of Quantities": The document drawn up in accordance with the Standard System of Measuring Building Work 1999 sixth Edition (Revised). The contractor shall have priced the document to reflect the contract sum.		
1.1	The definition of "Construction Period" is amended by replacing it with the following:  "Construction Period" means the period commencing on the date that possession of the site is given to the contractor and ending on the date of practical completion.		
3.1	Clause 3.1 shall be amended as follows:  Replace clause 3.1 with No clause		
3.3	Delete the following in the third line of clause 3.3  "of having received a payment guarantee from the employer [3.1]"		
7.2	Add the following clause after clause 7.1:  7.2 Without limiting the generality of the provisions of clause 7.0, the contractor's attention is drawn to the provisions of the Construction Regulations, 2014 issued in terms of the Occupational Health and Safety Act, 1993. It is specifically stated that the employer shall prepare a documented health and safety specification for the works (refer to Envelope A: Technical Proposal: Volume 1 of 2 C3.3 for a copy of the relevant specification and baseline risk assessment) and that the employer shall ensure that the contractor has made provision for the cost of health and safety measures during the execution of the works. The contractor shall price against this item for compliance with the Act and the Regulations and the provisions of the aforementioned health and safety specification.		
7.3	Add the following clause after clause 7.2:  7.3 Construction Environmental Management Plan (C4): The Construction Environmental Management Plan (CEMP) REV8 January 2016, incorporates specifications derived from recommendations in the Strategic Environmental Assessment (SEA), ELIDZ Rezoning Environmental Impact Assessment (EIA) and comments Report. Department of Economic Affairs, Environment and Tourism's Conditions of Approval for the rezoning EIA, together with specifications for good "environmental practice" for construction work. The purpose of the CEMP is to translate the recommendations of the SEA and the Rezoning EIA into a contractual environmental management plan which will be strictly applied during the construction of the works. A copy of the CEMP is attached (refer to Envelope A: Technical Proposal: Volume 1 of 2 C3.4 for a copy of the relevant specification) and tenderers are to familiarize themselves with the provisions contained therein and allow for compliance with the same.		

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

14.3.2	<p>Add the following to the end of clause 14.3.2:</p> <p>The expiry date for the security to be provided in terms of clause 14.3 and 14.4 shall be one hundred and eighty (180) calendar days after the date for practical completion for the work as a whole.</p> <p>Should the terms of the construction guarantee have an expiry date add the following clause after clause 5.2 on the JBCC Construction Guarantee form:</p> <p>5.3. The guarantor has failed to extend the guarantee when requested to do so by the Employer if the certificate of final complete in respect of the variable construction guarantee and certificate of practical completion in respect of the fixed construction guarantee under the contract has not been issued by the date, 30 calendar days prior to the expiry date of the construction guarantee, and that the construction guarantee is called up in terms of 5.0</p>
15.1.2	<p>Documents to be provided ten (10) working days after the acceptance of the tender</p> <ul style="list-style-type: none"> <li>• OHS Plan/File</li> <li>• Construction Guarantee</li> <li>• Construction Programme</li> </ul>
18.0	<p>Add the following clause after clause 18.4.</p> <p>18.5 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.</p>
19.1	<p>Amend clause 19.1 as follows:</p> <p>Delete "Where required in the priced document"</p>
19.1.1	<p>Amend clause 19.1.1 as follows:</p> <p>Substitute clause 19.1.1 with the following:</p> <p>The contractor will, throughout the entire contract period be responsible for the proper and adequate protection of all workers and visitors on the site from injury and damage resulting from the works and for the proper security of the site at all times. Furthermore, the contractor must allow for all necessary temporary hoardings, hoardings with gantries, fans, safety screens, barriers, access gates, covered gangways, walkways, overhead protection against falling objects and materials, security fences, etc. for the enclosure of the works and elements thereof for the protection of the public and others as required by prevailing BCMM bylaws, the Construction Regulations 2014 issued in terms of Occupational Health and Safety Act 1993, any other Laws and Regulations and/or demanded by his own site requirements. Allowance must furthermore be made for periodic adjustment of any enclosure or protection and for their eventual removal.</p> <p>Hoardings and Temporary Fencing prescribed by the Employer and have been measured in the Provisional Bills of Quantities.</p> <p>All other hoarding must be priced for under this clause in the Preliminaries Bill and no claims for additional hoardings and temporary fencing will be entertained.</p> <p>All site establishment, offices and storage of materials will be strictly limited to the area demarcated (See C3.1: Scope of Work, paragraph 1.5 Temporary works), which must be suitably fenced with 1,8m high 'Bonnox' fencing covered with</p>

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

	shadecloth to the satisfaction of the principal agent. The contractor shall be responsible for keeping such areas in a clean, sanitary and orderly condition.
19.1.2	<p>Add the following to the end of Clause 19.1.2:</p> <p>The office accommodation for meetings is to be adequately sized and equipped with a sound working table and chairs to accommodate at least thirty (30) people for site meetings. The room is to be well vented with air-conditioning and fitted with two large white boards and pin boards with markers and erasers. Two plug points to be provided within the room.</p>
19.1.3	<p>Add the following clause after clause 19.1.2</p> <p>Clause 19.1.3 An office for the Clerk of Works and Resident Engineers. The office shall consist of one room with a floor area of at least 30 m<sup>2</sup> and a ceiling height of at least 2.5 m, shall be weatherproof, shall have a either a wooden boarded floor that is at least 150mm above the ground or a concrete surface bed, and shall be provided with a ceiling and a lining to the walls, or equivalent insulation, with an acceptable type of door with a secure lock, and opening windows of glazed area at least 7 m<sup>2</sup>. The office shall be well ventilated with air-conditioning and shall be so insulated as to provide comfortable and dust free working conditions. The office shall have 10 power points and acceptable lighting. The following furniture needs to be provided: 10 chairs, 5 desks, 5 filing cabinets, 2 drawing racks.</p> <p>The access and the areas around the meeting room and office shall be surfaced with clean crushed stone. Furthermore, an adequate level parking area shall be provided also surfaced with clean crushed stone. Both areas shall be well drained, kept free of mud and maintained throughout the contract period.</p> <p>The contractor shall allow for the proper maintenance and regular cleaning of the meeting room and office during the contract period to ensure clean usable facilities at all times and shall clear away and make good on completion.</p> <p>Furthermore, it is a requirement that this compound as with the contractors site establishment facility should be fenced with a 1.8m high 'Bonnox' fence covered with shadecloth.</p>
19.2	<p>Amend the third sentence to clause 19.2 as follows:</p> <p>The contractor shall provide and erect a project notice board size 2.5m x 3.5m.</p>
19.3	<p>Add the following to the end of clause 19.3:</p> <p>The contractor shall re-instate/ rehabilitate the area used for site establishment (contractors yard area) as set out in Clause PS 6 of the CEMP Rev 8 January 2016 included in Part C3.4 in Envelope A: Volume 1 of 2 of these tender documents.</p>
29.2.1	<p>Clause 29.2.1 shall be amended as follows:</p> <p>Replace clause 29.2.1 with No clause</p>
31.9	Amend by substituting seven (7) calendar days with thirty (30) calendar days.
34.10	Amend by substituting seven (7) calendar days with thirty (30) calendar days.
31.5.3	<p>The Contract is to be adjusted using CPAP indices. (Clause 32.13) [31.5.3]: Yes. Base month is February 2017.</p> <p>Where CPAP is applicable, the contract sum will be adjusted in accordance with the JBCC Contract Price Adjustment Provisions (CPAP) as set out in the CPAP Indices Application Manual for use with P0151 indices published by Statistics South Africa, dated 1 January 2013 and any amendments thereto:</p>

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

	1)	Glass etc. measured in specialist section Metalwork, will be adjusted in terms of the index for that work group unless specifically stated otherwise in the Provisional Bills of Quantities
	2)	All electrical installations in buildings and power distribution systems shall be adjusted in terms of the index for Work Group 160 Electrical Installation. In case of uninterruptible power supplies, elevators, escalators and hoists, generating sets, motor-alternator sets and intercommunication systems shall be in accordance with Work Group 170
	3)	With reference to Work Group 190 a proportion of the value related preliminaries pro rata to the amount of work excluded from adjustment, shall be excluded from Contract Price Adjustment Provisions, if Option A has been selected for the adjustment of preliminaries
	4)	Further to clause 3.4.4 of the CPAP Indices Application Manual, the listing of additional items for exclusion by tenderers, will not be permitted
	5)	Where V results in a negative amount after application of the formula in clause 8.3 of the CPAP Indices Application Manual the factor of 0.55 shall be substituted by 1.45
31.16.2	The Employer will not be providing a payment guarantee for the waiver of the Contractor's lien or right of continuing possession of the site.	
<b>7.0</b>	<b>DECLARATION BY THE PRINCIPAL AGENT</b>	
	I, the principal agent named in 1.2 above, declare that the information provided above is <b>provisional</b> at the time of calling for tenders. Where necessary, should any of the above information need to be varied, tenderers will be forthwith informed thereof in writing	
	Principal Agent	
	Date	

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

## **C1.2 JBCC FORM OF GUARANTEE**



# Construction Guarantee

for use with the  
JBCC Principal Building Agreement

## GUARANTOR DETAILS AND DEFINITIONS

Guarantor means			
Physical address			
Guarantor's signatory 1		Capacity	
Guarantor's signatory 2		Capacity	
Employer means			
Contractor means			
Principal Agent means			
Works means			
Site means			
Agreement means	The JBCC Series 2000 Principal Building Agreement		
Contract Sum means	The accepted amount inclusive of tax of		
Amount in words			
Guaranteed Sum means	The maximum aggregate amount of		
Amount in words			
Construction Guarantee	(Insert Variable or Fixed)		(Insert expiry date)

## AGREEMENT DETAILS

Sections:	Total sections (No or n/a)		Last section (No / Identification or n/a)	
Principal Agent issues:	Interim payment certificates, Final payment certificate, Practical completion certificate/s and Final completion certificate/s			

## 1.0 VARIABLE CONSTRUCTION GUARANTEE

- 1.1 Where a variable Construction Guarantee in terms of the Agreement has been selected this 1.0 with 3.0 to 13.0 shall apply. The Guarantor's liability shall be limited to the diminishing amounts of the Guaranteed Sum as follows:

### GUARANTOR'S LIABILITY

- 1.1.1 Maximum Guaranteed Sum (not exceeding 10.0% of the contract sum) in the amount of:

Amount in words: \_\_\_\_\_

- 1.1.2 Reducing to the Guaranteed Sum (not exceeding 6.0% of the contract sum) in the amount of:

Amount in words: \_\_\_\_\_

### PERIOD OF LIABILITY

From and including the date of issue of this Construction Guarantee and up to and including the date of the interim payment certificate certifying in excess of 50% of the contract sum

From and including the day after the date of the aforesaid interim payment certificate and up to and including the date of the only practical completion certificate or last practical completion certificate where there are sections

- 1.1.3 Reducing to the Guaranteed Sum (not exceeding 4.0% of the contract sum) in the amount of:
- 
- Amount in words: \_\_\_\_\_
- 1.1.4 Reducing to the Guaranteed Sum (not exceeding 2.0% of the contract sum) in the amount of:
- 
- Amount in words: \_\_\_\_\_
- 1.2 For avoidance of doubt the Guarantor's liability limits set out in 1.1.1 to 1.1.4 shall apply in respect of any claim received by the Guarantor during the period in question

From and including the day after the date of the applicable practical completion certificate and up to and including the date of the only final completion certificate or last final completion certificate where there are sections

From and including the day after the date of the applicable final completion certificate and up to and including the date of the final payment certificate where payment is due to the Contractor, whereupon this Construction Guarantee shall expire. Where the final payment certificate reflects payment due to the Employer, this Construction Guarantee shall expire upon payment of the full amount certified

## 2.0 FIXED CONSTRUCTION GUARANTEE

- 2.1 Where a fixed Construction Guarantee in terms of the Agreement has been selected this 2.0 with 3.0 to 13.0 shall apply. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum as follows:

### GUARANTOR'S LIABILITY

Maximum Guaranteed Sum (not exceeding 5.0% of the contract sum) in the amount of:

Amount in words: \_\_\_\_\_

### PERIOD OF LIABILITY

From and including the date of issue of this Construction Guarantee and up to and including the date of the only practical completion certificate or the last practical completion certificate where there are sections, upon which this Construction Guarantee shall expire

- 3.0 The Guarantor hereby acknowledges that:
- 3.1 Any reference in this Guarantee to the Agreement is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship
- 3.2 Its obligation under this Guarantee is restricted to the payment of money
- 4.0 Subject to the Guarantor's maximum liability referred to in 1.0 or 2.0 , the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
- 4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Principal Agent in an interim or final payment certificate has not been made in terms of the Agreement and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2
- 4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) calendar days has elapsed since the first written demand in terms of 4.1 and that the sum certified has still not been paid therefore the Employer calls up this Construction Guarantee and demands payment of the sum certified from the Guarantor
- 4.3 A copy of the said payment certificate which entitles the Employer to receive payment in terms of the Agreement of the sum certified in 4.0
- 5.0 Subject to the Guarantor's maximum liability referred to in 1.0 or 2.0 , the Guarantor undertakes to pay the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Construction Guarantee stating that:



- 5.1 The Agreement has been cancelled due to the Contractor's default and that the Construction Guarantee is called up in terms of 5.0. The demand shall enclose a copy of the notice of cancellation; or
- 5.2 A provisional sequestration or liquidation court order has been granted against the Contractor and that the Construction Guarantee is called up in terms of 5.0. The demand shall enclose a copy of the court order
- 6.0 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4.0 and 5.0 shall not exceed the Guarantor's maximum liability in terms of 1.0 or 2.0
- 7.0 Where the Guarantor is a registered insurer and has made payment in terms of 5.0, the Employer shall upon the date of issue of the final payment certificate submit an expense account to the Guarantor showing how all monies received in terms of the Construction Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Construction Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund
- 8.0 Payment by the Guarantor in terms of 4.0 or 5.0 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor
- 9.0 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer deems fit and the Guarantor shall not have the right to claim his release from this Construction Guarantee on account of any conduct alleged to be prejudicial to the Guarantor
- 10.0 The Guarantor chooses the physical address as stated above for all purposes in connection herewith
- 11.0 This Construction Guarantee is neither negotiable nor transferable and shall expire in terms of either 1.1.4 or 2.1, or payment in full of the Guaranteed Sum or on the Guarantee expiry date, whichever is the earlier, where after no claims will be considered by the Guarantor. The original of this Construction Guarantee shall be returned to the Guarantor after it has expired
- 12.0 This Construction Guarantee, with the required demand notices in terms of 4.0 or 5.0, shall be regarded as a liquid document for the purpose of obtaining a court order
- 13.0 Where this Construction Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court

Signed at	_____	Date	_____
Guarantor's Signatory 1	_____	Guarantor's Signatory 2	_____
Witness	_____	Witness	_____

Guarantor's seal or stamp

**PART C2: PRICING DATA**

## **C2.1 PRICING INSTRUCTIONS**

## C2.1 Pricing Instructions

- 1 The Provisional Bills of Quantities have been drawn up in accordance with the Standard System of Measuring Building Work as amended published and issued by the Association of South African Quantity Surveyors (Sixth Edition (Revised), 1999.
- 2 The agreement is based on the JBCC Series 2000 Principal Building Agreement, prepared by the Joint Building Contracts Committee, Edition 5, July 2007. The additions, deletions and alterations to the JBCC Principal Building Agreement as well as the contract specific variables are as stated in the Contract Data. Only the headings and clause numbers for which allowance must be made in the Provisional Bills of Quantities are recited.
- 3 It will be assumed that prices included in the Provisional Bills of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to [www.stanza.org.za](http://www.stanza.org.za) or [www.iso.org](http://www.iso.org) for information on standards).
- 4 Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted.
- 5 Where any item is not relevant to this specific contract, such item is marked N/A (signifying "not applicable")
- 6 The Contract Data and the standard form of contract referenced therein must be studied for the full extent and meaning of each and every clause set out in Bill No.1 (Preliminaries) of the Provisional Bills of Quantities.
- 7 The Provisional Bills of Quantities are not intended for the ordering of materials. Any ordering of materials, based on the Provisional Bills of Quantities, is at the Contractor's risk.

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Tenderer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_ Employer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_

## **C2.2 PROVISIONAL BILLS OF QUANTITIES**

**(TO BE COMPLETED IN BLACK INK AND RETURNED)**

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Tenderer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_ Employer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_

# **SECTION NO. 1**

# **PRELIMINARIES**

## **SECTION NO. 1**

### **PRELIMINARIES**

#### **PRELIMINARIES**

##### **NOTES:**

##### **BUILDING AGREEMENT AND PRELIMINARIES**

The JBCC Series 2000 Principal Building Agreement (July 2007 Edition 5.0 Reprint 1) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described

The JBCC Principal Building Agreement Contract Data EC & CE form an integral part of this agreement.

The ASAQs Preliminaries (November 2007 Edition) published by the Association of South African Quantity Surveyors for use with the JBCC Principal Building Agreement shall be deemed to be incorporated in these bills of quantities, amended as hereinafter described.

Contractors are referred to the abovementioned documents for the full intent and meaning of each clause

The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only. Where standard clauses or alternatives are not entirely applicable to this contract such modifications, corrections or supplements as will apply are given under each relevant clause heading and such modifications, corrections or supplements shall take precedence notwithstanding anything contrary contained in the abovementioned documents.

Where any item is not relevant to this specific agreement such item is marked N/A (signifying not applicable).

##### **PREAMBLES FOR TRADES**

The Model Preambles for Trades 2008 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.

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

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

##### **STRUCTURE OF THIS PRELIMINARIES BILL**

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

Carried To Section Summary

R

Section No. 1

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Preliminaries

Section B : A recital of the headings of the individual clauses of the aforementioned Preliminaries document.

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

**PRICING OF PRELIMINARIES**

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

**SECTION A: PRINCIPAL BUILDING AGREEMENT**

**Definitions**

- |   |   |      |
|---|---|------|
| 1 | Clause 1.0 - Definitions and interpretation | Item |
|   | F: ..... V: ..... T: .....                  |      |

**Objective and preparations**

- |   |   |      |
|---|---|------|
| 2 | Clause 2.0 - Offer acceptance and performance obligations | Item |
|   | F: ..... V: ..... T: .....                                |      |
| 3 | Clause 3.0 - Documents                                    | Item |
|   | F: ..... V: ..... T: .....                                |      |
| 4 | Clause 4.0 - Design responsibility                        | Item |
|   | F: ..... V: ..... T: .....                                |      |
| 5 | Clause 5.0 - Employer's agents                            | Item |
|   | F: ..... V: ..... T: .....                                |      |
| 6 | Clause 6.0 - Contractor's site representative             | Item |
|   | F: ..... V: ..... T: .....                                |      |
| 7 | Clause 7.0 - Compliance with laws and regulations         |      |

**Health and Safety**

Without limiting the generality of the provisions of clause 7.0, the contractor's attention is drawn to the provisions of Construction Regulations, 2003 issued in terms of the Occupational Health and Safety Act, 1993. It is specifically stated that the employer shall prepare a documented health and safety specification for the works (refer to Volume 1 of 2 C3.2 for a copy of the relevant specification) and that the employer shall ensure that the contractor has made provision for the cost of health and safety measures during the execution of the works. The contractor shall price opposite this item for compliance with the act and the regulations and the reasonable provisions of the aforementioned health and safety specification [7.1]

**Construction Environmental Management Plan (C3)**

The Construction Environmental Management Plan (CEMP) incorporates specifications derived from recommendations in the SEA, ELIDZ Rezoning Environmental Impact Assessment (EIA) and comments Report. Department of Economic Affairs, Environment and Tourism's Conditions of Approval for the rezoning EIA, together with specifications for good "environmental practice" for construction work.

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		Amount
	<p>The purpose of the CEMP is to translate the recommendations of the SEA and the Rezoning EIA into a contractual environmental management plan which will be strictly applied during the construction of the works.</p> <p>A copy of the CEMP is attached (See 3.3 in Volume 1 of 2 of this document) and tenderers are to familiarize themselves with the provisions contained therein and allow for compliance with the same.</p> <p>F: ..... V: ..... T: .....</p>	
8	<p>Clause 8.0 - Works risk</p> <p>F: ..... V: ..... T: .....</p>	Item
9	<p>Clause 9.0 - Indemnities</p> <p>F: ..... V: ..... T: .....</p>	Item
10	<p>Clause 10.0 - Insurances</p> <p>F: ..... V: ..... T: .....</p>	Item
11	<p>Clause 11.0 - Special Insurances</p> <p>F: ..... V: ..... T: .....</p>	Item
12	<p>Clause 12.0 - Effecting Insurances</p> <p>F: ..... V: ..... T: .....</p>	Item
13	<p>Clause 13.0 - Assignment</p> <p>F: ..... V: ..... T: .....</p>	Item
14	<p>Clause 14.0 - Security</p> <p>F: ..... V: ..... T: .....</p>	Item
	<b><u>Execution</u></b>	
15	<p>Clause 15.0 - Preparation for and execution of the works</p> <p>F: ..... V: ..... T: .....</p>	Item
16	<p>Clause 16.0 - Site and access</p> <p>F: ..... V: ..... T: .....</p>	Item
17	<p>Clause 17.0 - Contract instructions</p> <p>F: ..... V: ..... T: .....</p>	Item
18	<p>Clause 18.0 - Setting out of the works</p> <p>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.</p> <p>F: ..... V: ..... T: .....</p> <p>Construct and maintain temporary road (approximately 6m wide x 200m long) of G7 road material in accordance with SABS 1200 DM compacted to 93% Mod AASHTO density for dedicated tenant access.</p> <p style="text-align: right;">d) Site</p> <p>Establishment</p>	Item
	Carried To Section Summary	R
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		Amount
19	<p>All site establishment, offices and storage of materials will be strictly limited to an area outside the site across the existing tarred roadway (see attached drawing at back of Bill), which must be suitably fenced with 1,8m high steel mesh fencing covered with shade cloth to the satisfaction of the principal agent. The contractor must also allow in his price for clearing this site of vegetable matter, shrubs, small trees, etc to make way for his sheds, offices, plant, etc. The contractor shall be responsible for keeping such areas in a clean, sanitary and orderly condition. The containers shall be removed by the contractor and the area made good at the completion of the contract.</p> <p>The tarred roadway between the construction site and the contractors yard is to be protected at all times and is to be cleaned on a regular basis. Any damage that may occur to this tarred roadway is to be made good by the contractor at his own expense. The contractor must also allow for a 5.00m wide temporary roadway from the tarred road to the construction site (see attached drawing at the back of Bill) and is to be made up of suitable layerworks to accommodate any traffic that will be used on it. The contractor must also allow for clearing this area of any vegetable matter, shrubs, small trees, etc. This area to be left clean after construction has been completed.</p> <p>F: ..... V: ..... T: .....</p> <p>Clause 19.0 - Temporary works and plant</p> <p>a) Site Enclosure</p> <p>The contractor will, throughout the entire contract period be responsible for the proper and adequate protection of all workers and visitors on the site from injury and damage resulting from the works and for the proper security of the site at all times. Furthermore, the contractor must allow for all necessary temporary hoardings, fans and walkways, overhead protection against falling objects and materials, security fences, etc. required by prevailing bylaws, the SHE Act and/or his own site requirements. Allowance must further more be made for periodic adjustment of any enclosure or protection and for their eventual removal. Other than the construction site itself, access is limited to the immediate area surrounding the works as enclosed by the entrance to the site. The limit of access and exist will be pointed out to the contractor by the Principal Agent at the pre-tender site inspection</p> <p>b) Temporary Barrier</p> <p>Security barrier average 8m high with splayed top to follow slope of roof formed of 19mm shutter board securely fixed to and including temporary scaffolding for support, all joints between boards and between boards and floor/roof to be taped with duct tape etc.</p> <p>Security barrier 4.8m high formed of 19mm shutter board securely fixed to and including temporary scaffolding for support, all joints between boards and between boards and floor/roof to be taped with duct tape etc</p> <p>c) Temporary Road</p>	Item
	<p>20 Clause 19.1.2</p> <p>The contractor shall provide, maintain and remove on completion, the following accommodation.</p>	
Carried To Section Summary		R
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		Amount
	<p>a) Meeting Room</p> <p>The room is to be adequately sized and equipped with a sound working table and chairs to accommodate at least thirty (30) people for site meetings.</p> <p>The room is to be well vented and fitted with two large white boards with markers and erasers.</p> <p>b) Generally</p> <p>The access and the areas around the offices and toilets shall be surfaced with clean crushed stone. Furthermore, an adequate level parking area shall be provided also surfaced with clean crushed stone. Both areas shall be well drained, kept free of mud and maintained throughout the contract period.</p> <p>The contractor shall allow for the proper maintenance and regular cleaning of the all the above facilities during the contract period to ensure clean usable facilities at all times and shall clear away and make good on completion.</p> <p>Furthermore, it is a requirement that this compound as with the contractors site establishment facility should be fenced with a 1.8m high gumpole and steel mesh fence covered with shade cloth.</p> <p>F: ..... V: ..... T: .....</p>	
21	<p>Clause 20.0 - Nominated subcontractors</p> <p>Refer to the provisions on general attendance hereinafter</p> <p>F: ..... V: ..... T: .....</p>	
22	<p>Clause 21.0 - Selected subcontractors</p> <p>General attendance of n/s subcontractors for pricing by the contractor shall be in accordance with the n/s agreement. Notwithstanding this provision, general attendance shall be deemed to include for the contractor to provide free of charge to any n/s subcontractor such scaffolding as may reasonably be required by such n / s subcontractor for the execution of the relevant subcontract work</p> <p>F: ..... V: ..... T: .....</p>	Item
23	<p>Clause 22.0 - Employer's direct contractors</p> <p>F: ..... V: ..... T: .....</p>	Item
24	<p>Clause 23.0 - Contractor's domestic subcontractors</p> <p>F: ..... V: ..... T: .....</p>	Item
	<b><u>Completion</u></b>	
25	<p>Clause 24.0 - Practical completion</p> <p>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.</p> <p>F: ..... V: ..... T: .....</p>	Item
26	<p>Clause 25.0 - Works completion</p> <p>F: ..... V: ..... T: .....</p>	Item
Carried To Section Summary		R
<p>Section No. 1</p> <p>Bill No. 1</p> <p>Preliminaries</p>		

		Amount
27	Clause 26.0 - Final completion F: ..... V: ..... T: .....	Item
28	Clause 27.0 - Latent defects liability period F: ..... V: ..... T: .....	Item
29	Clause 28.0 - Sectional completion F: ..... V: ..... T: .....	Item
30	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
31	Clause 30.0 - Penalty for late or non-completion F: ..... V: ..... T: .....	Item
<b><u>Payment</u></b>		
32	Clause 31.0 - Interim Payment  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. F: ..... V: ..... T: .....	Item
33	Clause 32.0 - Adjustment to the contract value  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. F: ..... V: ..... T: .....	Item
34	Clause 33.0 - Recovery of expense and loss F: ..... V: ..... T: .....	Item
35	Clause 34.0 - Final account and final payment F: ..... V: ..... T: .....	Item
36	Clause 35.0 - Payment to other parties F: ..... V: ..... T: .....	Item
<b><u>Cancellation</u></b>		
37	Clause 36.0 - Termination by employer - contractor's default F: ..... V: ..... T: .....	Item
38	Clause 37.0 - Termination by employer - loss and damage F: ..... V: ..... T: .....	Item
Carried To Section Summary		R
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		Amount
39	Clause 38.0 - Termination by contractor - employer's default F: ..... V: ..... T: .....	Item
40	Clause 39.0 - Termination - cessation of the works F: ..... V: ..... T: ..... <b><u>Dispute</u></b>	Item
41	Clause 40.0 - Settlement of disputes F: ..... V: ..... T: ..... <b><u>Contract Agreement</u></b>	Item
42	Clause 41.0 - Post tender provisions The required post tender information shall be inserted in the post tender provisions after consultation with the contractor F: ..... V: ..... T: .....	Item
43	Clause 42.0 - Contractual agreement F: ..... V: ..... T: ..... <b><u>SECTION B: PRELIMINARIES</u></b> <b><u>Definitions and Interpretation</u></b>	Item
44	Clause 1.0 - Definitions and interpretation F: ..... V: ..... T: ..... <b><u>Documents</u></b>	Item
45	Clause 2.1 - Checking of documents F: ..... V: ..... T: .....	Item
46	Clause 2.2 - Provisional bills of quantities F: ..... V: ..... T: .....	Item
47	Clause 2.3 - Availability of construction information F: ..... V: ..... T: ..... <b><u>Previous work and adjoining properties</u></b>	Item
48	Clause 3.1 - Previous work - dimensional accuracy F: ..... V: ..... T: .....	Item
49	Clause 3.2 - Previous work - defects F: ..... V: ..... T: .....	Item
50	Clause 3.3 - Inspection of adjoining properties F: ..... V: ..... T: ..... <b><u>Samples, shop drawings and manufacturer's instructions</u></b>	Item
51	Clause 4.1 - Samples of materials F: ..... V: ..... T: .....	Item
52	Clause 4.2 - Workmanship samples F: ..... V: ..... T: .....	Item
53	Clause 4.3 - Shop drawings F: ..... V: ..... T: .....	Item
Carried To Section Summary		R
Section No. 1		
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			Amount
54	Clause 4.4 - Compliance with manufacturer's instructions F: ..... V: ..... T: ..... <u><b>Deposits and fees</b></u>	Item	
55	Clause 5.1 - Deposits and fees F: ..... V: ..... T: ..... <u><b>Temporary services</b></u>	Item	
56	Clause 6.1 - Water F: ..... V: ..... T: .....	Item	
57	Clause 6.2 - Electricity F: ..... V: ..... T: .....	Item	
58	Clause 6.3 - Telecommunication facilities F: ..... V: ..... T: .....	Item	
59	Clause 6.4 - Ablution facilities F: ..... V: ..... T: ..... <u><b>Prime cost amounts</b></u>	Item	
60	Clause 7.1 - Responsibility for prime cost amounts F: ..... V: ..... T: ..... <u><b>Special attendance on n/s subcontractors</b></u>	Item	
61	Clause 8.1 - Special attendance F: ..... V: ..... T: ..... <u><b>General</b></u>	Item	
62	Clause 9.1 - Protection of the works F: ..... V: ..... T: .....	Item	
63	Clause 9.2 - Protection/isolation of existing/sectionally occupied works F: ..... V: ..... T: .....	Item	
64	Clause 9.3 - Security of the works F: ..... V: ..... T: .....	Item	
65	Clause 9.4 - Notice before covering work F: ..... V: ..... T: .....	Item	
66	Clause 9.5 - Disturbance F: ..... V: ..... T: .....	Item	
67	Clause 9.6 - Environmental disturbance F: ..... V: ..... T: .....	Item	
68	Clause 9.7 - Works cleaning and clearing F: ..... V: ..... T: .....	Item	
69	Clause 9.8 - Vermin F: ..... V: ..... T: .....	Item	
70	Clause 9.9 - Overhand work F: ..... V: ..... T: .....	Item	
Carried To Section Summary			R
Section No. 1 Bill No. 1 Preliminaries			

		Amount
<p><b><u>Schedule of Variables</u></b></p> <p>Information necessary for making choices 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 either no details or specific requirements are available or that the clause is irrelevant for this specific contract.</p>		
71	<p>10.1 - Provisional Bills of Quantities [clause 2.2]</p> <p>The quantities are provisional - Yes</p> <p>10.2 - Availability of construction documentation [clause 2.3]</p> <p>Construction documentation is complete - No</p> <p>10.3 - Previous work - dimensional accuracy [clause 3.1] - No</p> <p>10.4 - Previous work - defects [clause 3.2] - No</p> <p>10.5 - Inspection of adjoining properties [clause 3.3] - Yes</p> <p>10.6 - Water [clause 7.2]</p> <p>Option A (by contractor) - Yes</p> <p>Option B (by employer - free of charge) - No</p> <p>Option C (by employer - metered) - No</p> <p>10.7 - Electricity [clause 7.3]</p> <p>Option A (by contractor) - Yes</p> <p>Option B (by employer - free of charge) - No</p> <p>Option C (by employer - metered) - No</p> <p>10.8 - Telecommunications (clause 7.4)</p> <p>Telephone - Yes</p> <p>Facsimile - Yes</p> <p>E-Mail - Yes</p> <p>10.9 - Ablution facilities [clause 7.5]</p> <p>Option A (by contractor) - Yes</p> <p>Option B (by employer) - No</p> <p>10.10 - Protection of the works [clause 9.1]</p> <p>10.11 - Protection/isolation of existing/sectionally occupied works [clause 9.2]</p> <p>Protection/isolation is required - Yes</p> <p>10.13 - Environmental disturbance [clause 9.6] - Yes</p> <p>F: ..... V: ..... T: .....</p> <p><b><u>SECTION C: SPECIFIC PRELIMINARIES</u></b></p> <p><b><u>Specific Preliminaries :</u></b></p>	Item
72	<p>Site instructions</p>	
Carried To Section Summary		R
<p>Section No. 1</p> <p>Bill No. 1</p> <p>Preliminaries</p>		

		Amount
	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	Item
	F: ..... V: ..... T: .....	
73	Overtime	
	Should overtime be required to be worked for any reason whatsoever, the costs of such overtime is to be borne by the contractor unless the principal agent has specifically authorised, in writing, prior to execution thereof, that costs for such overtime are to be borne by the employer	Item
	F: ..... V: ..... T: .....	
74	Dayworks	
	Where in the opinion of the quantity surveyor any extra work cannot properly be measured or valued, the contractor will be allowed daywork prices therefor calculated upon the costs defined hereunder together with the stated percentages. The total thus arrived at shall be the total amount recoverable by the contractor for performing such work.	
	1. The cost to the contractor or sub-contractor of materials, being the net cost (at current market prices) actually paid for such materials after the deduction of cash discounts or if materials are supplied from the contractor's or sub-contractor's stock then the cost of such materials shall be based upon the current market price plus the cost of delivery to site; to which net cost 10 per cent thereof shall be added.	
	2. The cost of labour to the contractor or sub-contractor, being all items of direct cost of labour actually remunerated to the workmen concerned which shall include the cost of all allowances in terms of the Industrial Conciliation Act (where applicable) or any other wage determination applying in the area or any other charge or expense which is normally binding as well as all statutory levies to education and training funds as may be applicable relating to the class of labour concerned at the time when and in the area where the daywork is executed: to which labour costs 75 per cent in respect of shopfitting, wall and floor tiling, mosaic work and electrical work, 60 per cent in respect of plumbing, plastering, joinery and stone masonry and 40 per cent in respect of painting and decorating, general builders work and any other trade not specified herein, shall be added.	
	Hourly based rates for labour shall be the current market rates for labour based upon standard working hours and shall be applied in respect of the time spent by workers directly engaged on the particular dayworks including any operators operating mechanical plant and transport and erecting and dismantling other plant. If a claim is made that individual workmen have been paid wages and allowances in excess of the minimum legalised rates, then proof must be furnished that such workmen had been so paid prior to the commencement of the extra work referred to.	
	Time lost due to inclement weather shall be excluded from the time charged.	
	3. Other direct costs, being any related direct costs such as mechanical plant and transport, other than costs of material and labour shall be the net cost thereof to which net cost 10 per cent thereof shall be added.	
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		Amount
75	<p>4. The rates for mechanical plant shall be commercial hire rates current at the time of executing the daywork and shall include fuel and insurance costs.</p> <p>Supporting vouchers reflecting the time spent and materials used each week shall be delivered for verification to the Quantity Surveyor not later than twenty one days after the end of the week concerned. Should the contractor fail to submit the vouchers within this time, the Quantity Surveyor shall determine a fair price for the work.</p> <p>F: ..... V: ..... T: .....</p> <p>Warranties for materials and workmanship</p> <p>Where warranties for materials and/or workmanship are called for, the contractor shall obtain a written warranty, addressed to the employer, from the entity supplying the materials and/or doing the work and shall deliver same to the principal agent on the final completion of the contract</p> <p>The warranty shall state that workmanship, materials and installation are warranted for a specific period from the date of final completion and that any defects that may arise during the specified period shall be made good at the expense of the entity supplying the materials and/or doing the work, upon written notice to do so.</p> <p>The warranty will not be enforced if the work is damaged by defects in the execution of the works, in which case the responsibility for replacement shall rest entirely with the contractor.</p> <p>F: ..... V: ..... T: .....</p>	Item
76	<p>Co-operation of the contractor for cost management</p> <p>It is specifically agreed that the contractor accepts the obligation of assisting the principal agent in implementing proper cost management. The contractor will be advised by the principal agent of all cost management procedures which will be implemented to ensure that the final building cost does not exceed the budget.</p> <p>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.</p> <p>F: ..... V: ..... T: .....</p>	Item
77	<p>Overloading</p> <p>The contractor shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the works or temporary works eg scaffolding, etc. The contractor shall submit details of his proposed loading, storage, plant erection, etc to the principal agent for approval prior to proceeding with such loading, storing or erecting and shall comply with and pay for the principal agent's requirements in connection with the provision of temporary support work, etc. Any damage caused to the works by overloading shall be made good by the contractor at his sole expense.</p> <p>F: ..... V: ..... T: .....</p>	Item
78	<p>Propping of floors below</p> <p>F: ..... V: ..... T: .....</p>	Item
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		Amount
	<p>The contractor is advised that propping of floors below may be required if he wishes to use any areas of completed suspended reinforced concrete slabs for vehicle access, storage of materials and goods and location of plant, scaffolding, etc. The location of these areas and any necessary propping shall be approved by the principal agent and the cost thereof shall be borne by the contractor.</p> <p>F: ..... V: ..... T: .....</p>	Item
79	<p>Testing of windows for watertightness</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
80	<p>Testing of flat roof waterproofing for watertightness</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 forty (40) hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing.</p> <p>F: ..... V: ..... T: .....</p>	Item
81	<p>Ingress of water</p> <p>It is the Contractors responsibility to prevent ingress of water into the buildings whilst all work is being completed, and damage arising out of the above will be made good at the Contractors expense.</p> <p>F: ..... V: ..... T: .....</p>	Item
82	<p>Proprietary branded products</p> <p>The contractor shall take delivery of, handle, store, use, apply and/or fix all proprietary branded products in strict accordance with the manufacturer's instructions after consultation with the manufacturer's authorised representative.</p> <p>F: ..... V: ..... T: .....</p>	Item
83	<p>As built drawings</p> <p>The position of construction breaks and the extend of individual concrete pours are to be recorded by the contractor on the structural engineer's drawings and are to be submitted to the principal agent and the structural engineer for their records.</p> <p>F: ..... V: ..... T: .....</p>	Item
84	<p>Removal and Making Good of Temporary Works, etc, on Completion</p> <p>The Contractor shall remove all (except where specifically stated otherwise) temporary Works, roads, services and the like used for this Contract and shall make good to the entire satisfaction of the Principal Agent any damage resulting therefrom.</p> <p>F: ..... V: ..... T: .....</p>	Item
85	<p>Making Good</p>	
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		Amount
	<p>All materials and workmanship in building up, making good, etc., are to match existing and where new materials abutt existing, they are to be neatly jointed to same.</p> <p>'Making good' existing work where disturbed or damaged shall mean the provision of the necessary new material to match existing and the necessary workmanship so that a complete restoration is achieved to the satisfaction of the Principal Agent.</p> <p>'Making good' where abutting walls, etc., are removed, shall mean the provision of the necessary material and workmanship in filling the gaps to match surrounding finishes so that a complete and perfect surface, continuous with surrounding surfaces and matching of same, is obtained to the Principal Agent's satisfaction.</p> <p>F: ..... V: ..... T: .....</p>	
86	<p><b>Shop Drawings</b></p> <p>The term 'shop drawings' shall mean drawings, layout drawings, diagrams, illustrations, schedules, performance charts, brochures, operating manuals and other data which are prepared by the Contractor or any Sub-Contractor, manufacturer, supplier or distributor and which illustrate the specified portion of the work.</p> <p>The Contractor shall ensure that all shop drawings required for the Works in terms of this Contract, all Selected/Nominated Sub-Contracts and/or any Principal Agent's instruction, are prepared and submitted timeously in accordance with the following procedure:</p> <p>A) Three prints of shop drawings of all fabricated work, working or setting out drawings, shop details and schedules shall be submitted to the Principal Agent, for approval. Such work shall not be carried out until such approval has been given.</p> <p>B) Shop drawings shall be submitted to the Principal Agent for approval at least two weeks prior to the date on which such approval is required in order to comply with the Contract Programme.</p> <p>C) All submissions shall be prepared in accordance with the Contract drawings and specifications and/or any Principal Agents instructions and any deviation shall be specifically highlighted in writing, with a detailed explanation of the reason for such deviation, together with any cost and/or time implications.</p> <p>Delays in approval of shop drawings due to non-compliance with drawings, specifications and/or Principal Agents instructions shall not constitute grounds for any claims for delay, extension of time and the like.</p> <p>D) When the Principal Agent advises that shop drawings have been approved, the original transparencies of such drawings shall immediately be submitted to the Principal Agent so that the Principal Agents stamp of approval may be appended thereto. Thereafter, four prints of the approved shop drawings, setting out drawings and schedules shall be furnished to the Principal Agent. As many prints of the approved shop drawings and schedules as required shall also be furnished to the Works. No work shall be performed in accordance with drawings and/or catalogues not stamped with the Principal Agents approval.</p>	
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		Amount
87	<p>E) The Contractor, Sub-Contractor or Supplier, as the case may be, shall be responsible for ensuring that all dimensions affecting shop drawings conform to the dimensions of built work.</p> <p>F) The Principal Agents approval of shop drawings is limited to checking conformity with specification and shall not relieve the Contractor, Sub-Contractor or Supplier of his responsibility for design, erection or installation fit, nor does it vary his contractual or delictual obligations and liabilities.</p> <p>G) Should the Contractor, Sub-Contractor or Supplier be of the opinion that corrections to shop drawings made by the Principal Agent constitute a change to the scope of work, then he shall immediately advise the Principal Agent in writing of this, together with the cost and/or programme implications thereof, in order to obtain the Architects directive.</p> <p>H) One copy of the final approved set of 'Shop Drawings' is to be submitted to the Quantity Surveyors for purposes of valuation remeasurement.</p> <p>F: ..... V: ..... T: .....</p>	Item
	<p><b>Scaffolding</b></p> <p>In accordance with the 6th Edition of the Standard System of Measurement, no special scaffolding has been measured. The Tenderer is advised to visit the site and to study the drawings to assess any special requirements he may deem necessary for the Works. The Tenderer is to price against this item in respect of any special scaffolding and temporary propping requirements for the Works.</p> <p>F: ..... V: ..... T: .....</p>	Item
	<p><b>Media releases</b></p> <p>All rights of publication of articles in the media, together with any advertising relating thereto or in any way connected with this project, shall vest with the employer</p> <p>The contractor together with his subcontractors shall not, without the prior written consent of the employer, cause any statement or advertisement to be printed, screened or aired by the media</p> <p>F: ..... V: ..... T: .....</p>	Item
	<p><b>SMME'S</b></p> <p>The principal contractor shall comply with all the requirement of mandatory subcontracting of SMMEs for a minimum of 30% of their contract value (Including VAT) as stipulated under the SMME subcontracting requirements. The Principal Contractor shall on fulltime basis closely mentor, manage and supervise all SMMEs and shall manage, guide and assist each SMMEs in all aspects of management, execution and completion of his/her subcontract. This shall typically include the on-site productivity planning and management of materials, cost management, contract management, Health and Safety management, quality management, communication management and close-out documentation.</p>	
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Provision for pricing of compliance with the aforementioned is made under this clause and it is explicitly pointed out that all requirements in respect of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained.

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**SUMMARY OF CATEGORIES**

Category : Fixed R.....

Category : Value R.....

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**PRELIMINARIES**

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## **SECTION NO. 2**

## **BUILDING WORKS**

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 2</u></b> <b><u>BUILDING WORKS</u></b> <b><u>BILL NO. 1</u></b> <b><u>EARTHWORKS</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <b><u>Nature of ground</u></b> <p>A soils investigation has been carried out on the site by the engineer and the report is annexed to these bills of quantities. The soils report indicates that the ground varies between silty sand, reworked soil of mixed origin and residual shale, all of which will be deemed as 'earth'. All very hard unweathered shale, ironstone, etc., the removal of which necessitates the use of explosives or heavy duty hydraulic percussion hammers (peckers), will be classified as 'hard rock'</p> <b><u>Excavation for working space in rock</u></b> <p>Notwithstanding clause 11 page 8 of the Standard System of Measuring Building Work, excavation for working space in rock will be measured in cubic metres to the extent executed and given as 'extra over' bulk excavation or trench and hole excavation as the case may be</p> <b><u>Carting away of excavated material</u></b> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p> <b><u>Filling</u></b> <p>Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any necessary multiple handling of material</p> <b><u>Testing</u></b> <p>Prices for filling are to include for all necessary density tests in accordance with SABS 1200D</p>				
Carried to Collection			R	
Section No. 2 Bill No. 1 Earthworks				



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	Unit	Quantity	Rate	Amount
<b><u>EXCAVATION ETC</u></b>				
<b><u>Excavation in earth not exceeding 2m deep</u></b>				
1 Reduced levels under floors	m <sup>3</sup>	6 110		
2 Trenches	m <sup>3</sup>	609		
3 Holes	m <sup>3</sup>	654		
4 Retaining wall footings	m <sup>3</sup>	495		
<b><u>Excavation in earth exceeding 2m and not exceeding 4m deep</u></b>				
5 Trenches	m <sup>3</sup>	5		
6 Holes	m <sup>3</sup>	281		
7 Retaining wall footings	m <sup>3</sup>	5		
<b><u>Back excavation of vertical sides of excavations in earth for working space including backfilling compacted to 98% Mod AASHTO density</u></b>				
8 Not exceeding 500mm deep for placing and removing formwork to walls etc., 1000mm away from excavated face	m <sup>2</sup>	10		
9 Exceeding 1m and not exceeding 2m deep for placing and removing formwork to walls etc., 1000mm away from excavated face	m <sup>2</sup>	1 322		
<b><u>Extra over excavation in earth for working space for excavation in</u></b>				
10 Soft rock	m <sup>2</sup>	66		
11 Hard rock	m <sup>2</sup>	40		
<b><u>Extra over trench and hole excavations in earth for excavation in</u></b>				
12 Soft rock	m <sup>3</sup>	407		
13 Hard rock	m <sup>3</sup>	209		
<b><u>Extra over all excavations for carting away</u></b>				
14 Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m <sup>3</sup>	2 740		
<b><u>Risk of collapse of excavations</u></b>				
15 Sides of trench and hole excavations not exceeding 1,5m deep	m <sup>2</sup>	1 626		
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		Unit	Quantity	Rate	Amount
16	Sides of trench and hole excavations exceeding 1,5m deep	m <sup>2</sup>	2 655		
	<b><u>Keeping excavations free of water</u></b>				
17	Keeping excavations free of all water other than subterranean water	Item			
	<b><u>FILLING ETC OTHER THAN BULK</u></b>				
	<b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density</u></b>				
18	Under floors, steps, pavings, etc.	m <sup>3</sup>	1 929		
19	Backfilling to trenches, holes, etc.	m <sup>3</sup>	3		
	<b><u>Earth filling using imported G7 material in backfilling to trenches,etc and compacted in layers not exceeding 150mm thick to 95% Mod AASHTO density</u></b>				
20	Under floors, steps, pavings, etc.	m <sup>3</sup>	1 930		
21	Backfilling to trenches, holes, etc.	m <sup>3</sup>	1 346		
	<b><u>Earth filling using imported G5 material in backfilling to trenches,etc and compacted in layers not exceeding 150mm thick to 95% Mod AASHTO density</u></b>				
22	Under floors, steps, pavings, etc.	m <sup>3</sup>	1 930		
	<b><u>Earth filling using imported G5 material in backfilling to trenches,etc and compacted in layers not exceeding 150mm thick to 98% Mod AASHTO density</u></b>				
23	Under floors, steps, pavings, etc.	m <sup>3</sup>	1 930		
	<b><u>Coarse river sand filling supplied by the contractor</u></b>				
24	Under floors etc.	m <sup>3</sup>	643		
	<b><u>Compaction of surfaces</u></b>				
25	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	m <sup>2</sup>	12 865		
	<b><u>Prescribed density tests on filling</u></b>				
26	Modified AASHTO Density test	No	86		
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		Unit	Quantity	Rate	Amount
<b><u>SOIL POISONING</u></b>					
<b><u>Soil insecticide in accordance with SANS 5859</u></b>					
27	Under floors etc. including forming and poisoning shallow furrows against foundation walls etc., filling in furrows and ramming	m <sup>2</sup>	12 865		
28	To bottoms and sides of holes, trenches etc.	m <sup>2</sup>	5 334		
Carried to Collection				R	
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Earthworks

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 2</u></b> <b><u>BUILDING WORKS</u></b> <b><u>BILL NO. 2</u></b> <b><u>CONCRETE, FORMWORK AND REINFORCEMENT</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <b><u>Cost of tests</u></b> <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> <b><u>Lightweight concrete</u></b> <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><u>Formwork</u></b> <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>				
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	Unit	Quantity	Rate	Amount
<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> <p><b><u>UNREINFORCED CONCRETE CAST ON/IN FORMWORK</u></b></p> <p><b><u>15MPa/19mm concrete</u></b></p>				
1	m <sup>3</sup>	3		
2	m <sup>3</sup>	5		
<p><b><u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u></b></p> <p><b><u>15MPa/19mm concrete</u></b></p>				
3	m <sup>3</sup>	321		
4	m <sup>3</sup>	69		
<p><b><u>REINFORCED CONCRETE CAST ON/IN FORMWORK</u></b></p> <p><b><u>25MPa/19mm concrete</u></b></p>				
5	m <sup>3</sup>	96		
6	m <sup>3</sup>	3		
7	m <sup>3</sup>	2		
8	m <sup>3</sup>	10		
9	m <sup>3</sup>	9		
<p><b><u>30MPa/19mm concrete</u></b></p>				
10	m <sup>3</sup>	65		
11	m <sup>3</sup>	188		
12	m <sup>3</sup>	24		
13	m <sup>3</sup>	119		
14	m <sup>3</sup>	55		
15	m <sup>3</sup>	26		
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Concrete, Formwork And Reinforcement				

		Unit	Quantity	Rate	Amount
	<b><u>35MPa/19mm concrete with and including washed sand and Fibrin fibre at 900g/m3</u></b>				
16	Surface beds cast in panels on waterproofing.	m <sup>3</sup>	2 449		
	<b><u>TEST CUBES</u></b>				
	<b><u>Test cubes</u></b>				
17	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	86		
	<b><u>CONCRETE SUNDRIES</u></b>				
	<b><u>Finishing top surfaces of concrete smooth with a mechanical power pan to FM3 finish</u></b>				
18	Surface beds, slabs, etc.	m <sup>2</sup>	12 865		
	<b><u>Prepare concrete surface by means of mechanically grinding to expose aggregates, remove dust and apply two coats of impact and chemically resistant self-levelling HACCP certified Polyurethane-urea cement screed, all applied in strict accordance with the manufacturer's instructions</u></b>				
19	4mm Thick average to surface beds, slabs, etc.	m <sup>2</sup>	12 865		
	<b><u>Finishing top surfaces of concrete smooth with a power float</u></b>				
20	Surface beds, slabs, etc.	m <sup>2</sup>	587		
	<b><u>Protection of power floated floors:</u></b>				
21	Allow for protecting top of power floated concrete slab against any damage that may occur during any construction work above ie structural steelwork, roof sheeting, etc including repairing any damage that may have occurred	m <sup>2</sup>	11 629		
	<b><u>PVC weepholes pipe cast into concrete</u></b>				
22	75mm Diameter PVC weep pipe 400mm long cast into concrete retaining wall	No	7		
	<b><u>ROUGH FORMWORK (DEGREE OF ACCURACY II) (CPAP WORK GROUP NO. 111)</u></b>				
	<b><u>Rough formwork to sides</u></b>				
23	Bases (Provisional)	m <sup>2</sup>	268		
24	Rectangular stub columns in foundations (Provisional)	m <sup>2</sup>	189		
25	Edges exceeding 300mm high	m <sup>2</sup>	2		
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		Unit	Quantity	Rate	Amount
26	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	432		
	<b><u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u></b>				
	<b><u>(CPAP WORK GROUP NO. 111)</u></b>				
	<b><u>Smooth formwork to sides</u></b>				
27	Retaining walls	m <sup>2</sup>	1 496		
28	Steps	m <sup>2</sup>	7		
	<b><u>Smooth formwork to soffits</u></b>				
	<b><u>Boxing in smooth formwork to form</u></b>				
29	25 x 25mm Chamfers along top or bottom edges	m	348		
30	100 x 100mm Extreme splayed rebates in sides along top edges	m	5		
	<b><u>Boxing out smooth formwork to form</u></b>				
	<b><u>MOVEMENT JOINTS ETC</u></b>				
	<b><u>2 Layers of 3 ply malthoid slip joints between horizontal concrete and brick surfaces including cement mortar bed:</u></b>				
31	Not exceeding 300mm wide (Provisional)	m	285		
	<b><u>10mm Horizontal Expansion Joints including 'Jointex' polyethylene joint former with hinged temporary blocking piece, through concrete:</u></b>				
32	Not exceeding 300mm high (Provisional)	m	56		
	<b><u>10mm Horizontal Expansion joints including 'Jointex' polyethylene joint former with hinged temporary blocking piece, through concrete:</u></b>				
33	20mm Joints not exceeding 300mm high (Provisional)	m	252		
	<b><u>Expansion joints with 20mm including 'Jointex' polyethylene joint former with hinged temporary blocking piece between vertical concrete surfaces, including necessary formwork</u></b>				
34	100mm Rebated joints 10mm wide and 200mm high through slabs etc (Provisional)	m	56		
	<b><u>Expansion joints with 10mm Impregnated softboard between horizontal concrete and brick surfaces:</u></b>				
35	10mm Joints not exceeding 300mm high (Provisional)	m	566		
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		Unit	Quantity	Rate	Amount
	<b><u>Saw-cut joints</u></b>				
36	8 x 40mm Saw-cut joints in top of concrete	m	1 509		
	<b><u>Joggle construction joints through concrete including thick cement slurry to one face</u></b>				
37	Surface beds not exceeding 300mmm thick	m	474		
	<b><u>REINFORCEMENT (CPAP WORK GROUP NO. 114)</u></b>				
	<b><u>Mild steel reinforcement to structural concrete work</u></b>				
38	8mm Diameter bars	Tonnes	37.50		
39	10mm Diameter bars	Tonnes	17.50		
	<b><u>High tensile steel reinforcement to structural concrete work</u></b>				
40	8mm Diameter bars	Tonnes	37.50		
41	10mm Diameter bars	Tonnes	35.00		
42	12mm Diameter bars	Tonnes	35.00		
43	16mm Diameter bars	Tonnes	35.00		
44	20mm Diameter bars	Tonnes	35.00		
45	25mm Diameter bars	Tonnes	36.00		
46	32mm Diameter bars	Tonnes	7.20		
	<b><u>Fabric reinforcement</u></b>				
47	Mesh Ref 395 fabric reinforcement in concrete slabs etc.	m <sup>2</sup>	12 865		
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Bill No. 2

Concrete, Formwork And Reinforcement

	Unit	Quantity	Rate	Amount
<p><b><u>SECTION NO. 2</u></b>  <b><u>BUILDING WORKS</u></b>  <b><u>BILL NO. 3</u></b>  <b><u>MASONRY</u></b>  <b><u>PREAMBLES</u></b>  The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities  <b><u>SUPPLEMENTARY PREAMBLES</u></b>  Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.  <b><u>Masonry:</u></b>  Bricks are to be solid modular masonry units having a compressive strength of 14MPa.  <b><u>Sizes in descriptions:</u></b>  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>Cement Mortar</u></b>  Unless otherwise described, all brickwork shall be built in 1:5 cement mortar.  <b><u>Hollow walls etc:</u></b>  Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole and galvanised butterfly wire ties at 5 per square metre.  Descriptions of hollow walls to receive concrete filled cavities shall be deemed to include building up brickwork in increments not exceeding 1m high or as otherwise instructed by Engineer, filling cavity with concrete infill, before raising brickwork further.  Walls in two skins described as 'bagged and sealed' shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats 'Brixal' bitumen emulsion waterproofing coating.</p>				
<p>Carried to Collection</p> <p>Section No. 2</p> <p>Bill No. 3</p> <p>Masonry</p>			R	

	Unit	Quantity	Rate	Amount
<p><b><u>Face bricks:</u></b></p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour.</p> <p><b><u>Pointing:</u></b></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>Cleaning:</u></b></p> <p>To prevent staining of face brickwork, provide cover during building or renovating operations. Refer to Clay Brick Association Clay Masonry Technical Guide, Part 6.</p> <p><b><u>Samples:</u></b></p> <p>Samples of all masonry building units, except those for walls described as 'load bearing', shall consist of a minimum of 6 units. Samples of building units to be used in walls described as 'load bearing' shall consist of 30 units from every 30 000 units delivered to site.</p> <p>Rates for brickwork, faced brickwork, etc shall include for all required samples.</p> <p><b><u>Sample panels:</u></b></p> <p>A sample panel (size approximately 1000 x 1000mm high) will be required to be provided on site for co-ordination and quality of work. The Contractor is to allow for removal on completion if so required.</p> <p><b><u>BRICKWORK IN FOUNDATIONS (PROVISIONAL)</u></b></p> <p><b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar</u></b></p>				
1	m <sup>2</sup>	6		
2	m <sup>2</sup>	144		
3	m <sup>2</sup>	147		
<p><b><u>BRICKWORK IN SUPERSTRUCTURE</u></b></p> <p><b><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar</u></b></p>				
4	m <sup>2</sup>	17		
5	m <sup>2</sup>	826		
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		Unit	Quantity	Rate	Amount
6	280mm Hollow walls of two half brick skins including butterfly ties and cavities filled with 15Mpa concrete (filling elsewhere measured)	m <sup>2</sup>	512		
<b><u>BRICKWORK SUNDRIES</u></b>					
<b><u>Sundries</u></b>					
7	40mm PVC weephole sleeve pipe not exceeding 250mm long, built into brickwalls	No	356		
8	Bag outer face of inner skin of brickwork and apply two coats bituminous paint	m <sup>2</sup>	512		
9	Cement mortar triangular fillet one course high in bottom of 110mm wide cavity wall including leaving open perpend at 1,00m centres	m	511		
10	Labour and material building 110mm cavity solid vertically for half brick width	m	75		
11	80mm Brick mesh reinforcement in walls	m	400		
12	Ditto, but 155mm	m	2 072		
13	Labour and material building 110mm cavity solid horizontally for two courses	m	60		
<b><u>Prestressed fabricated concrete lintels including necessary temporary supports</u></b>					
14	75 x 100mm Lintels in lengths not exceeding 3m	m	56		
<b><u>Galvanised hoop iron cramps, ties, etc.</u></b>					
15	38 x 2mm Cramp 500mm long with one end fixed to timber and other end built into brickwork	No	100		
16	30 x 1,6mm Wall tie 500mm long with one end built into brickwork and other end shot fixed to steel column	No	304		
<b><u>FACE BRICKWORK</u></b>					
<b><u>Face bricks (Allow the PC Amount R 10 000.00 nett per thousand supplied and delivered to site excluding Vat, waste and profit) pointed with recessed horizontal and vertical joints - Contractor is to allow for all labour, materials, plant, tools, waste, mark-ups, etc for building in face bricks. (The rate will be adjusted for material costs only when the Client selects the Face Brick.):</u></b>					
17	Extra over brickwork for face brickwork in foundations (Provisional)	m <sup>2</sup>	152		
Carried to Collection				R	
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**SECTION NO. 2**  
**BUILDING WORKS**  
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Masonry

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 2</u></b> <b><u>BUILDING WORKS</u></b> <b><u>BILL NO. 4</u></b> <b><u>WATERPROOFING</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.</p> <b><u>Waterproofing:</u></b> <p>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</p> <p>Waterproofing is to be laid in strict accordance with the manufacturers Code of Practice and by an Approved Contractor.</p> <b><u>Preparation of substrata:</u></b> <p>Screeded roof surfaces shall be firm, dry and clean. Corners shall be coved or arris rounded. All surfaces to receive waterproofing are to be fully primed with a solvent based bitumen primer.</p> <p>Timber boarded roof surfaces shall be dry, clean and even. All internal angles are to receive a timber triangular fillet. Corners and edges shall be arris rounded.</p> <b><u>DAMPPROOFING OF WALLS AND FLOORS</u></b> <b><u>One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B)</u></b>				
1	In walls	m <sup>2</sup>	108	
Carried to Collection			R	
Section No. 2 Bill No. 4 Waterproofing				



		Unit	Quantity	Rate	Amount
	<b><u>One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape</u></b>				
2	Under surface beds	m <sup>2</sup>	12 865		
	<b><u>Two coats bitumen emulsion waterproof coating</u></b>				
3	On bagged brick walls	m <sup>2</sup>	768		
	<b><u>WATERPROOFING TO ROOFS, FLOORS BASEMENTS, ETC</u></b>				
	<b><u>Megaflow MEG 315 or equally approved Geocomposite Panel Drain System</u></b>				
4	170 x 40mm Drain system laid flat between backfilled layers under surface beds	m	1 650		
	<b><u>A10 Bidim or equally approved nonwoven needle punched continuous filament polyester Geotextile fabric:</u></b>				
5	Laid flat between backfilled layers under surface beds	m <sup>2</sup>	12 865		
	<b><u>WATERSTOPS</u></b>				
	<b><u>Sika AR-20 or equally approved surface water bar</u></b>				
6	150 x 3.5mm Thick with appropriate fixing clips with 15.00m waterhead resistance fixed at junction of sump botton with sump wall (to be installed by a certified contractor)	m	348		
	<b><u>SEALING STRIPS, JOINT SEALANTS, ETC</u></b>				
	<b><u>Sikadur 42ZA epoxy sealant in filling to the above saw cut joint in strict accordance with the Manufacturers instructions</u></b>				
7	8 x 40mm In saw cut joints in floors	m	1 152		
	<b><u>Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc.</u></b>				
8	10 x 10mm In expansion joints in floors, aprons, etc, including raking out expansion joint filler as necessary	m	566		
9	4 x 10mm In saw cut joints in floors.	m	240		
10	12 x 12mm In vertical expansion joints including raking out expansion joint filler as necessary. (Provisional).	m	307		
	<b><u>Polyurethane sealing compound including backing cord, bond breaker, primer, etc.</u></b>				
11	20 x 12mm In expansion joints in floors, aprons, etc, including raking out expansion joint filler as necessary	m	10		
	Carried to Collection			R	
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<b><u>SECTION NO. 2</u></b> <b><u>BUILDING WORKS</u></b> <b><u>BILL NO. 5</u></b> <b><u>ROOF COVERINGS</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.</p> <b><u>PROFILED METAL SHEETING AND ACCESSORIES</u></b> <b><u>Notes:</u></b> <p>The following roof sheeting systems are to be manufactured and/or supplied and installed in strict accordance with the Manufacturer's and/or Supplier's specifications.</p> <p>Fixing of all roof sheeting is to be in accordance with the Manufacturer's approved Instruction Book.</p> <p>The manufacturer shall comply with ISO9002 Quality Management System. Sheeting shall be laid in strict accordance with the manufacturer's specifications by an approved contractor.</p> <p>A written and approved five year guarantee of site-workmanship and watertightness shall be issued after final inspection of concealed-fix roofing, cladding, etc., by the Manufacturer.</p> <b><u>Erection, handling and storage:</u></b> <p>Every precaution shall be taken to prevent damage to roof sheets, cladding, etc., during all stages of construction. Duck boards should be used when necessary to protect the sheeting from damage. Sheeting which has become deformed or damaged in any way, shall be replaced.</p>				
Carried to Collection			R	
Section No. 2 Bill No. 5 Roof Coverings				

	Unit	Quantity	Rate	Amount
<p>Sheetings should be suitably supported, clear of the ground, under well ventilated cover, away from risk of damage from building operations, contact with cement, dust, lime and abrasive dust, until required to be installed.</p> <p>The contractor shall exercise special care when handling long length sheeting, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting and incomplete sections must be adequately secured against possible movement by wind and gravity.</p> <p>The contractor shall ensure that all materials used on site for cladding, etc are transported, handled and stored in accordance with the manufacturer's recommendations. Material damaged shall be rejected and replaced with undamaged material at the contractor's expense. Repair of damaged material will not generally be permitted. Rates are to include for preventing damage and protecting sheets through all stages of construction.</p> <p><b><u>Cleaning, etc:</u></b></p> <p>All debris, swarf, etc. arising from the fixing of the cladding shall be removed from the sheeting as the fixing progresses. In addition, off-cuts of insulation, surplus fasteners and sealants, mandrels from pop rivets, off-cuts of flashings and sheeting, surplus flashing, food packaging, cartons, bottles, cans, etc shall not be left on the roof or in the gutters.truction.</p> <p>Care shall be taken to ensure that no such material enters, blocks or partially impedes the flow of water into the outlets, down pipes, etc.</p> <p><b><u>ZIP-TEK 420 SHEETING</u></b></p> <p><b><u>Profile:</u></b></p> <p>The profile is roll-formed from certified material complying Aluminium 3004. The profile shall have a male and female upstand with an upstanded height of 68mm, which will provide a capillary brake. The nett effective cover width will be 424mm. The male head shall be smaller than the female head.</p> <p><b><u>Flashing:</u></b></p> <p>Stop endings must be formed at the apex and the pan turned down at the eaves to form a drip. The roof sheeting shall be closed as necessary with purpose-made flashings of a design approved by the supplier. These flashings shall be notched around ribs where necessary. All these operations must be performed with special tools available from the supplier.</p>				
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Roof Coverings				
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		Unit	Quantity	Rate	Amount
<b><u>0,9mm Thick ' Hulamin 3004 Aluminium ZIP-TEK 420' Aluminium sheeting and accessories in single lengths with Stucco embossed PVDF finish (Colour Metallic Silver) on external face and standard backing coat on internal face and accessories concealed fixed to steel purlins or rails, with 'Zip-Tek' Aluminium Halters fixed with stainless steel self-tapping screws in strict accordance with the Manufacturers instructions:</u></b>					
1	Roof covering with pitch not exceeding 50 degrees including bitumen impregnated sealer strips at laps	m <sup>2</sup>	11 559		
2	Soffit cladding	m <sup>2</sup>	172		
3	Gable flashing 462mm girth	m	828		
4	Apex flashings 720mm girth	m	792		
5	Gutter flashing 462mm girth	m	1 258		
6	Headwall flashing 500mm girth	m	792		
7	Narrow flute serrated closer including polybutton	m	1 689		
8	Broad flute serrated closer including polybutton	m	1 654		
<b><u>0,9mm Thick ' Hulamin 3004 Aluminium ZIP-TEK 420' Aluminium sheeting and accessories in single lengths with Stucco embossed PVDF finish (Colour Azure Blue) on external face and standard backing coat on internal face and accessories concealed fixed to steel purlins or rails, with 'Zip-Tek' Aluminium Halters fixed with stainless steel self-tapping screws in strict accordance with the Manufacturers instructions:</u></b>					
9	Roof covering with pitch not exceeding 50 degrees including bitumen impregnated sealer strips at laps.	m <sup>2</sup>	3 432		
10	Apex flashings 720mm girth	m	396		
11	Gable flashing 462mm girth	m	396		
12	Gutter flashing 462mm girth	m	792		
13	Headwall flashing 500mm girth	m	396		
Carried to Collection				R	
Section No. 2					
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Roof Coverings					

		Unit	Quantity	Rate	Amount
	<b><u>0.8mm Thick 'Hulamin Aluminium BR7' Aluminium Sheeting And Accessories In Single Lengths With Stucco Embossed PVDF Colourtech Finish (Colour Metallic Silver) On External Face And Standard Backing Coat On Internal Face And Accessories Concealed Fixed To Steel Purlins Or Rails, With 'Ziptech' Aluminium Halts Fixed With Stainless Steel Self Tapping Screws In Strict Accordance With The Manufacturer's Instructions:</u></b> Note Side cladding fixed with broad flute facing out.				
14	Side cladding including bitumen impregnated sealer strips to side laps and 'Cladseal 300' tape to cladding rails at approximatley 1600mm centres	m <sup>2</sup>	3 886		
15	Closure piece 110mm girth	m	409		
16	Ditto, but 450mm girth	m	409		
17	Drip flashing 231mm girth	m	432		
18	Corner flashing 300mm girth	m	432		
19	Corner/jamb flashing 462mm girth	m	264		
20	Cap flashing 770mm girth	m	432		
21	Narrow flute serrated closer including polybutton	m	264		
22	Broad flute serrated closer including polybutton	m	264		
	<b><u>0.8mm Thick 'Hulamin Aluminium BR7' Aluminium Sheeting And Accessories In Single Lengths With Stucco Embossed PVDF Colourtech Finish (Colour Azure Blue) On External Face And Standard Backing Coat On Internal Face And Accessories Concealed Fixed To Steel Purlins Or Rails, With 'Ziptech' Aluminium Halts Fixed With Stainless Steel Self Tapping Screws In Strict Accordance With The Manufacturer's Instructions:</u></b> Note Side cladding fixed with broad flute facing out				
23	Side cladding fixed diagonally on elevation including bitumen impregnated sealer strips to side laps and 'Cladseal 300' tape to cladding rails at approximatley 1600mm centres	m <sup>2</sup>	702		
24	Closure piece 110mm girth	m	279		
25	Ditto, but 450mm girth	m	278		
26	Drip flashing 231mm girth	m	54		
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	Section No. 2				
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		Unit	Quantity	Rate	Amount
<b><u>ROOF AND WALL INSULATION (CPAP WORK GROUP NO. 122)</u></b>					
<b><u>'Isover Factorylite' or equally approved non combustible light weight fibreglass insulation faced on one side with white metalised foil laid taut over purlins at approximately 1.00m centres and fixed concurrent with roof covering including PVC coated galvanised steel straining wires where required all in strict accordance with the manufacturers instructions</u></b>					
39	50mm Insulation sheeting laid taut over purlins at approximately 1000mm centres and fixed concurrent with roof covering with including PVC coated steel straining wires and double-sided tape at edges where required all in strict accordance with the manufacturers instructions	m <sup>2</sup>	14 780		
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Section No. 2				R	
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		Unit	Quantity	Rate	Amount
<b><u>DOORS</u></b>					
<b><u>Wrought meranti doors</u></b>					
2	44mm Framed batten door size 813 x 2032mm formed of 44 x 108mm styles and top rail, 22 x 108mm middle ledge and braces and 22 x 220mm bottom ledge filled in with 22 x 69mm V-jointed one side boarding and including 1.60mm galvanised sheet iron plate fixed on one face of door	No	6		
<b><u>Solid Flush Doors Faced Both Sides With Commercial Veneer With Two Hardwood Edges Hung To Timber Or Steel Frames</u></b>					
3	44mm Door size 813 x 2032mm	No	19		
4	44mm Door size 900 x 2032mm	No	3		
5	44mm Double door size 1614 x 2032mm with rebated meeting styles, the one leaf 813mm wide and the other leaf 450mm wide	No	12		
6	Extra over last for forming 400 x 600mm opening rebated all round to receive glass (elsewhere measured) including 22 x 22mm splayed glazing beads mitred around	No	12		
7	Extra for forming 450 x 300mm opening for and including natural aluminium louvre unit and frame	No	5		
<b><u>Fire doors with commercial veneer</u></b>					
8	Class B fire door 1800 x 2032mm high including pressed steel frame for half brick wall and preparing frame for door closer and lock	No	2		
<b><u>FRAMED FRAMES ETC</u></b>					
<b><u>Wrought meranti</u></b>					
9	70 x 108mm Rebated frame bolted to steel support (elsewhere measured)	m	195		
<b><u>BEADS, ARCHITRAVES, ETC</u></b>					
<b><u>Wrought meranti</u></b>					
10	19mm Quadrant beads	m	224		
11	38 x 50mm Rebated, splayed and grooved weather boards fixed in and including grooves in doors	m	10		
Carried to Collection				R	
Section No. 2					
Bill No. 6					
Carpentry And Joinery					

**SECTION NO. 2**

**BUILDING WORKS**

**BILL NO. 6**

**CARPENTRY AND JOINERY**

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Bill No. 6

Carpentry And Joinery

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<b><u>SECTION NO. 2</u></b> <b><u>BUILDING WORKS</u></b> <b><u>BILL NO. 7</u></b> <b><u>CEILINGS PARTITIONS AND ACCESS FLOORING</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.</p> <b><u>Descriptions:</u></b> <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.</p> <p>Ceiling boards must be stacked on a level surface in a dry place on a timber platform. Boards must be carried on edge.</p> <p>Skimmed ceilings must be plastered the same day that the 'Rhino-board' has been erected.</p> <p>Electrical light fittings, diffusers, panels, etc. generally are lay-in units of the same dimensions as the suspension grid described and allowance must be made accordingly for their support inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof).</p> <b><u>Ceilings:</u></b> <p>Unless otherwise described ceilings shall be deemed to be horizontal.</p>				
Carried to Collection			R	
Section No. 2 Bill No. 7 Ceilings Partitions And Access Flooring				

	Unit	Quantity	Rate	Amount
<b><u>Bulkheads:</u></b> Bulkheads are defined as those portions of ceilings which are stepped down from the general ceiling level in a particular room or area and which generally occur along the perimeter. Their purpose is either to conceal services or to create architectural features. Bulkheads have only been described as such where they conform to the above definition and where the horizontal or vertical dimensions do not exceed 900mm. Where these dimensions are more than 900mm such portions of ceilings have been included in the appropriate general items of ceilings.				
<b><u>Steel components:</u></b> All steel components for ceilings, partitions, etc are to be galvanised in accordance with SANS 121.				
<b><u>CEILING TIMBERS, BEADS, INSULATION, ETC</u></b> <b><u>'Aerolite' or equally approved insulation with a Rval of 2.88m3 K/W laid over ceiling grid</u></b>				
1	m <sup>2</sup>	1 476		
<b><u>SUSPENDED CEILINGS</u></b> <b><u>600 x 600 x 12.5mm Thick Donn Gyprex White Vinylclad Gypsumboard Ceiling Panels On White Aluminium Pre-Painted Exposed Tee Suspension System Including Main And Cross Tees, Necessary Hangers, Grids, Etc.</u></b>				
2	m <sup>2</sup>	235		
<b><u>1200 x 600 x 4mm Thick Everite Embossed White Vinylclad Nutec Ceiling Panels On White Aluminium Pre-Painted Exposed Tee Suspension System Including Main And Cross Tees, Necessary Hangers, Grids, Etc.</u></b>				
3	m <sup>2</sup>	1 241		
<b><u>9.5mm Thick Rhinoboard Plasterboard Ceiling Panels On Donn Galvanised Suspension System Including Main And Cross Tees, Necessary Hangers, Grids, Etc. Including Skimming All Joints All In Strict Accordance With The Manufacturers Instructions</u></b>				
4	m <sup>2</sup>	120		
5	m <sup>2</sup>	150		
Carried to Collection			R	
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Ceilings Partitions And Access Flooring				

		Unit	Quantity	Rate	Amount
6	Horizontal/Vertical portion of bulkheads, suspended not exceeding 1m below steel purlins	m <sup>2</sup>	150		
	<b><u>Cornices, perimeter trims, etc. to suspended ceilings</u></b>				
7	White aluminium shadowline cornice plugged	m	258		
	<b><u>FIXED PARTITIONS (CPAP WORK GROUP NO. 138)</u></b>				
	<b><u>SUPPLEMENTARY PREAMBLES</u></b>				
	Partitions consisting of 63,5mm Ultra Drywall steel studs inserted at 600mm centres into 63,5mm Ultrasteel Drywall steel track at top and bottom clad on both sides as described, including additional studs as necessary at abutments, ends, etc. Boards shall be fixed in strict accordance with the manufacturer's instructions and all joints shall be taped and jointed				
	Unless otherwise described rates for partitions shall be deemed to include for standard flat section aluminium skirtings on both sides.				
	Wall paper and/or paint and varnish finishes are given elsewhere.				
	<b><u>Gypwall Classic 63/F30S42 Or Other Approved Partitioning System With 63.5mm Steel Studs And Covered On Both Sides With 12.5mm Rhinoboard (Skirtings Elsewhere Measured)</u></b>				
8	Partitioning 3500mm high with bottom track plugged and top track fixed to suspended ceiling tee	m	18		
9	Extra over partition 3.5m high for vertical abutment.	No	5		
10	Extra over partition 3.5m high for corner.	No	5		
11	Extra over partition 3.5m high for end intersection with brick wall	No	5		
12	Extra over partition 3.5m high for T-intersection.	No	8		
13	Extra over partition 3.5m high for fair end.	No	10		
	<b><u>Extra over partition for natural anodised aluminium door frame including one and a half pairs of 100mm aluminium butt hinges including additional studding, trimming, (door and ironmongery elsewhere measured)</u></b>				
14	For single door size 813 x 2032mm high	No	9		
15	For double door size 1800 x 2032mm high	No	1		
	Carried to Collection			R	
	Section No. 2				
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	Ceilings Partitions And Access Flooring				

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		Unit	Quantity	Rate	Amount
<b><u>TOILET CUBICLES</u></b>					
<b><u>Toilet partition cubicles consisting of 16mm thick particle board partition panels, doors and stiles with melamine laminated construction on both sides, edged all round with 22 x 22mm lipped channel and fixed into position by means of full height vertical aluminium receiving channels plugged to walls and fixed to pilasters, partitions are to be supported by a continuous 25 x 25mm aluminium transom section over doors and supplied with standard ironmongery comprising indicator bolts, hat and coat hooks, doors stops, toilet roll holders and rubber buffers, all exposed aluminium sections are to be natural anodised (Colour of sheets to Architects later detail)</u></b>					
27	Partition 1800 x 1830mm high	No	18		
28	Full stile 210 x 1981mm high	No	11		
29	Intermediate palister 230 x 1830mm high	No	18		
30	End pilaster 115 x 1981mm high	No	12		
31	End stile 145 x 1981mm high	No	12		
32	Wall stile 105 x 1981mm high	No	13		
33	Extra over for chromium plated rising butt hinge	No	42		
34	Extra over for powder coating to aluminium beading, brackets and ironmongery - per cubicle	No	7		
35	Door 762 x 1762mm high including all standard ironmongery	No	19		
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Ceilings Partitions And Access Flooring					

**SECTION NO. 2**

**BUILDING WORKS**

**BILL NO. 7**

**CEILINGS PARTITIONS AND ACCESS FLOORING**

**COLLECTION**

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Bill No. 7

Ceilings Partitions And Access Flooring

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 2</u></b> <b><u>BUILDING WORKS</u></b> <b><u>BILL NO. 8</u></b> <b><u>FLOOR COVERINGS</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.</p> <b><u>Adhesives and sealants:</u></b> <p>All adhesives and Sealants must meet the TVOC Content Limits outlined in Table IEQ-13.2. The contractor is advised to refer to the Particular Specifications where the detailed adhesives and sealants requirements are detailed.</p> <b><u>Carpets and floor coverings:</u></b> <p>All carpets and floor coverings must meet the TVOC emissions limits outlined in Table IEQ-13.3. The contractor is advised to refer to the Particular Specifications where the detailed flooring requirements are detailed.</p> <b><u>FLOOR COVERINGS</u></b> <p><b><u>Allow the PC Amount of R440.00/m<sup>2</sup> (Four Hundred and Forty Rand) (Excluding VAT) for the Supply and Delivery of Carpets, fixed with adhesive on screeded floors (screed elsewhere measured) - Contractor is to allow for waste, profit, labour for fixing carpets and all adhesives, all to manufacturers specifications. (The rate will be adjusted for material costs only, when the Client selects the carpets.):</u></b></p>				
1 On floors	m <sup>2</sup>	440		
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Section No. 2 Bill No. 8 Floor Coverings				

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 2</u></b> <b><u>BUILDING WORKS</u></b> <b><u>BILL NO. 9</u></b> <b><u>METALWORK</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.</p> <b><u>Descriptions:</u></b> <p>Descriptions of bolts shall be deemed to include nuts and washers.</p> <p>Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described.</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.</p> <b><u>SUNDRY GALVANISED STEELWORK</u></b> <b><u>Corner protectors</u></b> 1 90 x 65 x 6mm Angle iron corner protector with M12 x 120mm lugs welded on at 450mm centres and cast into top edge of concrete sump including welded angles, etc m 125 2 Ditto, but 150 x 90 x 10mm m 110  <b><u>GALVANISED PRESSED STEEL DOOR FRAMES</u></b> <b><u>1.6mm Rebated frames suitable for half brick walls with two 100mm brass butt hinges per door leaf</u></b> 3 Frame for door 813 x 2032mm high No 19 4 Frame for door 900 x 2032mm high No 3 5 Frame for double door 1614 x 2032mm high No 12  <div>Carried to Collection</div> <div>Section No. 2</div> <div>Bill No. 9</div> <div>Metalwork</div>				
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Metalwork

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 2</u></b> <b><u>BUILDING WORKS</u></b> <b><u>BILL NO. 10</u></b> <b><u>PLASTERING</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.</p> <b><u>Preparation of surfaces to receive screeds, plaster, etc.:</u></b> <p>Surfaces shall be dry and clean, free of dust, sand, grit and flaking particles, laitance and loose matter, contaminants such as oil, grease, etc. All free standing water to be removed prior to application. Absorbent surfaces to be thoroughly pre-soaked in fresh water. Oil, grease, animal fats, etc. to be removed with suitable approved product and to be applied in strict accordance with the manufacturer's instructions. All concrete surfaces to receive plaster must first be prepared and receive an approved keying/bonding agent or a thick cement slurry coating prior to plastering.</p> <p>All floors should be level and free of all material as per SANS10155 and all existing screeds should be tested for satisfactory levelness using a level light meter.</p> <p>As a general rule, a maximum deviation of not more than 3mm over an area of 3m is a good guide and will give a quality level floor, with the deviation not being too close together and too frequent.</p> <p>Where the screed does not conform to these requirements then a self levelling screed is to be applied and the rates are to include for the testing of the existing screeds as described above.</p>				
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Section No. 2 Bill No. 10 Plastering				

	Unit	Quantity	Rate	Amount
<p>For granolithic applied monolithically, the concrete floor shall be swept clean after bleeding of the concrete has ceased and the slab has begun to stiffen; any remaining bleed water shall be removed and the granolithic applied immediately thereafter. For granolithic to be bonded to the floor slab after it has hardened, the slab surface shall be hacked (preferably by mechanical means) until all laitance, dirt, oil, etc. is dislodged and swept clean of all loose matter. The slab shall then be wetted and kept damp for at least six hours before applying the granolithic.</p> <p><b><u>Method</u></b></p> <p>The method to be used shall be either the monolithic method or the bonded method</p> <p><b><u>Mix</u></b></p> <p>Granolithic shall attain a compressive strength of at least 41MPa. The coarse aggregate shall comply with SANS 1083 and shall generally be capable of passing a 10mm mesh sieve. Where the thickness of the granolithic exceeds 25mm, the size of the coarse aggregate shall be increased to the maximum size compatible with the thickness of the granolithic.</p> <p><b><u>Panels</u></b></p> <p>Granolithic shall be laid in panels not exceeding 14m<sup>2</sup> for monolithic finishes, not exceeding 9,5m<sup>2</sup> for bonded finishes and not exceeding 6m<sup>2</sup> for all external granolithic. Wherever possible, panels shall be square but at no time should the length of the panel exceed 1,5 times its width.</p> <p>Where possible joints between panels shall be positioned over joints in the floor slab and shall be at least 3mm wide through the full thickness of the finish, separated by strips of wood or fibreboard and finished with V-joints</p> <p><b><u>Laying</u></b></p> <p>Monolithic granolithic shall be applied to the partially set slab and thoroughly compacted and lightly wood floated to the required levels</p> <p>Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels</p>				
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Plastering

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 2</u></b> <b><u>BUILDING WORKS</u></b> <b><u>BILL NO. 11</u></b> <b><u>TILING</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.</p> <b><u>Fixing</u></b> <p>Unless described as 'fixed with adhesive to plaster (plaster elsewhere)' descriptions of tiling on brick or concrete walls, columns, etc. shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc. shall be deemed to include 1:3 plaster bedding</p> <p>Tiling described as 'fixed with adhesive on power floated concrete' shall be deemed to include for approved tiling key-coat</p> <p>Ceramic, porcelain, marble and granite tiles are to be fixed and grouted with suitable adhesives and grouts from the range of products as recommended by the manufacturer of the tiles</p> <b><u>CERAMIC / PORCELAIN WALL TILING</u></b> <b><u>Allow the PC Amount of R230.00 (Two Hundred and Thirty Rand)(Excluding VAT) for the Supply and Delivery of Ceramic Wall Tiles, fixed with TAL tile adhesive on plastered walls (plaster e/m) with 3mm spacings and grouted with TAL grout (Bathroom Wall Areas) - Contractor is to allow for, waste, profit, labour for fixing tiles and all adhesive and grouting, all to manufacturers specifications. (The rate will be adjusted for material costs only, when the Client selects the wall tile.):</u></b>				
1	On walls	m <sup>2</sup>	538	
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Section No. 2				
Bill No. 11				
Tiling				

		Unit	Quantity	Rate	Amount
2	On narrow widths	m <sup>2</sup>	12		
	<b><u>FLOOR TILING</u></b> <b><u>Allow the PC Amount of R300.00 (Three Hundred Rand) (Excluding VAT) for the Supply and Delivery of Ceramic Floor Tiles, fixed with Tal Goldstar Adhesive on screeded concrete floors (screed e/m) and Pointing With Tal Tinted Epoxy Grout with continuous joints in both directions – Contractor is to allow for waste, profit, labour of fixing tiles and all adhesive and grouting, all to manufacturers specifications. (The rate will be adjusted for material costs only, when the Client selects the wall tile.):</u></b>				
3	On floors and landings	m <sup>2</sup>	1 057		
4	On floors to falls	m <sup>2</sup>	25		
5	On floors to falls to outlet of shower	m <sup>2</sup>	3		
6	On narrow widths	m <sup>2</sup>	125		
7	Skirting 100mm high of cut skirting tiles	m	490		
8	Ditto, but fixed to drywalling	m	49		
	<b><u>SUNDRIES</u></b> <b><u>M Trim or equally approved:</u></b>				
9	M Trim or equally approved stainless steel (grade 304) tile trim as Kirk Marketing SSE120	m	216		
10	M Trim stainless steel (grade 304) tile square edge trim as Kirk Marketing SQE120 (used as stair nosing)	m	168		
11	M Trim stainless steel (grade 304) movement joint with grey insert as Kirk Marketing SMJ120	m	49		
Carried to Collection				R	
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**TILING**  
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Tiling

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 2</u></b> <b><u>BUILDING WORKS</u></b> <b><u>BILL NO. 12</u></b> <b><u>PLUMBING AND DRAINAGE</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect/Engineer.</p> <p>Polycop' polypropylene pipes:</p> <p>Polypropylene pipes 54mm diameter and under shall be seamless copper coloured class 16 pipes jointed with 'Fast-fuse' heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated.</p> <p>Pipes shall be firmly fixed to walls etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions.</p> <p>All pipe diameters are nominal external.</p> <p><b><u>uPVC pressure pipes and fittings:</u></b></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>				
Carried to Collection			R	
Section No. 2 Bill No. 12 Plumbing And Drainage				

	Unit	Quantity	Rate	Amount
<p><b><u>Copper pipes:</u></b></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 'Cobra Watertech' type or equally approved. Capillary solder fittings shall comply with ISO 2016 and SABS specifications. Only compression fittings shall be used in walls or in ground.</p> <p><b><u>Fixing :</u></b></p> <p>Unless specifically otherwise stated, descriptions of pipes shall be deemed to include for fixing to walls etc. casting in, building in or suspending not exceeding 1m below suspension level</p> <p>Descriptions of wall mounted, floor standing, drop-in, etc type sanitary fittings shall be deemed to include fixing in position and all fixing accessories</p> <p>Descriptions of proprietary items shall include fixing in position and all fixing accessories as specified by the manufacturer</p> <p><b><u>Chasing :</u></b></p> <p>Chasing pipes into new walls shall be regarded as "building in" and is not measured seperately. The cost of chasing and making good shall be included in the rates for the pipes.</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>Wire gratings:</u></b></p> <p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.</p> <p><b><u>Exposed concrete surfaces:</u></b></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>				
Carried to Collection				
Section No. 2				
Bill No. 12				
Plumbing And Drainage				
			R	



	Unit	Quantity	Rate	Amount
<p><b><u>Excavations:</u></b></p> <p>No claim for rock excavation 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><b><u>Laying, backfilling, bedding, etc of pipes:</u></b></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 clauses 5.1 and 5.2 of each of the following: SABS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SABS 1200 DB : Earthworks (Pipe trenches). Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200 LB : Bedding (Pipes).</p> <p>Unless otherwise described bedding of rigid pipes shall be class B bedding.</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><b><u>Stainless steel basins, sinks, wash troughs, urinals, etc:</u></b></p> <p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.</p> <p>Prices for sinks are to include for preparing the worktop to receive the fitting and for securely fixing sinks to worktops using the clips provided. The Contractor is to provide worktop manufacturers with details of cut outs and ensure that the cut openings are sufficiently accurate to provide proper engagement for these clips.</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><b><u>General :</u></b></p> <p>All screw and bolt fixings for sanitary ware are to be stainless steel or chromium plate on brass.</p> <p>Prices for sanitary fittings are to include in the rate for the application of white anti-fungal silicone sealant between the fittings and abutting wall and floor finishes, vanity tops, bathroom fittings, etc.</p>				
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Plumbing And Drainage				
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		Unit	Quantity	Rate	Amount
	<b><u>RAINWATER DISPOSAL</u></b>				
	<b><u>FULBORE OUTLETS</u></b>				
1	100mm "Fulbore" side outlet including joint to pipe	No	2		
	<b><u>SANITARY FITTINGS</u></b>				
	<b><u>'Vaal Sanitaryware' vitreous china wash hand basins and pedestals:</u></b>				
2	Wash hand basin as "Vaal Lotus VAA-702603WH" or other approved with pedestal as "Vaal VAA-715222WH" complete with waste union, overflow tube attachment, plug and chain, brackets, etc (taps elsewhere measured)	No	16		
3	Wash hand basin as "Vaal Hibiscus VAA-702303WH" or other approved with pedestal as "Vaal VAA-715222WH" complete with waste union, overflow tube attachment, plug and chain, brackets, etc (taps elsewhere measured)	No	2		
	<b><u>'Vaal Sanitaryware' vitreous china WC suites:</u></b>				
4	WC suite comprising pan as "Vaal Afsan VAA-750600WH" and approved double flap seat complete (Flushmaster valve elsewhere measured)	No	11		
5	Paraplegic WC suite comprising pan as "Vaal Pearl Paraplegic VAA-730103WH", approved double flap seat", matching 9 litre cistern with side flush valve, flush pipe, etc complete	No	2		
6	Close couple WC suite comprising pan as "Vaal Entice VAA-772663WH", approved double flap seat", matching 6 litre cistern with pushbutton top dual flush back inlet, etc complete	No	11		
	<b><u>Vaal Sanitaryware' vitreous china urinals:</u></b>				
7	Sweetpea' 565 x 275 x 310mm white vitreous china wall mounted back inlet urinal (product code 705127) including 38mm chromium plated domical grating (product code 8787Z0) and chromium plated back inlet spreader (product code 7054Z2) and concealed flush valve (elsewhere measured) including flushpipe and fittings, fitted on and including two hanger brackets (product code 8127Z0) plugged and screwed to wall.	No	2		
8	White vitreous china wall mounted urinal division (product code 7052) including hanger brackets and screws plugged and screwed to wall.	No	8		
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	Plumbing And Drainage				

		Unit	Quantity	Rate	Amount
	<b><u>Franke' grade 304 (18/10) 1.2mm stainless steel sinks:</u></b>				
9	535 x 454 x 255mm Stainless steel drip sink as Franke 350950 or other approved complete with approved brackets, etc and fixing in position	No	1		
10	Stainless steel double bowl sink unit as "Frankie Quinline FRA-1990019" or other approved size 1360 x 500mm complete with waste union, plug, chain, etc and fixing on top of timber fitting (elsewhere measured)	No	1		
	<b><u>WASTE UNIONS ETC</u></b>				
	<b><u>Cobra Watertech' waste unions etc:</u></b>				
11	32mm Code 301 chrome plated basin waste union.	No	16		
12	32mm Chrome plated pop-up basin waste assembly (code 380).	No	2		
13	38mm Chrome plated heavy pattern slotted sink/washtrough waste union with flange, shank, slotted with back nut plug, chain and stay.	No	2		
	<b><u>TRAPS ETC</u></b>				
	<b><u>Traps, etc.:</u></b>				
14	50mm PVC "P" trap including joint to pipe and outlet of fitting	No	2		
15	40x40mm Urinal plain mini "P" trap (DPE F40 PMP or equivalent)	No	8		
16	40 x 50mm uPVC deep seal 'P' or 'S' trap.	No	2		
17	40mm Shower trap as Cobra COB-373SQ including joint to pipe	No	2		
18	32 x 40mm Chromium plated bottle trap as Cobra COB-385/35 including joint to pipe and outlet of fitting	No	16		
19	40 x 40mm Ditto, as Cobra COB-365/40	No	2		
20	40mm Brass combination sink "P" trap including joint to pipe and outlet of fitting	No	2		
	<b><u>TAPS, VALVES, ETC</u></b>				
	<b><u>Stopcocks, Stoptaps, Gate valves, Check valves, Strainers, etc:</u></b>				
21	15mm Chromium plated angle regulating valve with 350mm flexi tube as Cobra 832/350 including joints to pipes	No	35		
	Carried to Collection			R	
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		Unit	Quantity	Rate	Amount
22	15mm Brass stopcock including joints to pipes	No	18		
23	22mm Ditto	No	12		
24	28mm Ditto	No	8		
25	35mm Ditto	No	8		
26	75mm Ditto	No	8		
27	15mm Brass hose tap including joint to pipe	No	4		
28	15mm Chromium plated sink mixer as "Cobra COB-PA-870" or other approved including joints to pipes	No	2		
29	15mm Chromium plated basin mixer as "Cobra COB-PA-851" or other approved including joints to pipes	No	16		
30	15mm Chromium plated medical mixer as "Cobra COB-NM-851" or other approved including joints to pipes	No	2		
31	15mm Chromium plated shower mixer as "Cobra COB-PA-856" or other approved including joints to pipes	No	2		
32	15mm Chromium plated shower arm as "Cobra COB-027" or other approved and rose as "Cobra COB-076-NITRO" or other approved including joint to pipe	No	2		
33	Chromium plated metering tap as Cobra COB-KM2-301 including joints to pipes	No	4		
34	22mm Brass pressure control valve including joints to pipes	No	8		
35	22mm Brass relief valve including joints to pipes	No	12		
	<b><u>Toilet and urinal flushvalves and built in cisterns:</u></b>				
36	Chromium plated flushvalve and spargepipe as Cobra COB-FJ2-100 including joints to pipes	No	2		
37	Cobra FJ8.102 CP Flushmaster Junior toilet flush valve	No	11		
	<b><u>Pressure reducing valves, vacuum breakers, etc.:</u></b>				
38	22mm Brass vacuum breaker including joint to pipe	No	4		
39	22mm 600kPa Mono pressure control valve (code KH3.116).	No	2		
40	22mm Vacuum breaker (code KHN4.200CX).	No	15		
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	Bill No. 12				
	Plumbing And Drainage				

		Unit	Quantity	Rate	Amount
<b><u>SANITARY PLUMBING</u></b>					
<b><u>UPVC Pipes And Fittings</u></b>					
41	40mm pipes	m	85		
42	50mm Pipes	m	95		
43	110mm Pipes	m	335		
44	40mm Pipes chased into walls including making good to plaster	m	35		
45	50mm Ditto	m	22		
46	40mm Pipes in fill under slab including any excavation, backfilling, etc	m	25		
47	50mm Ditto	m	20		
<b><u>Extra For:</u></b>					
48	50mm Straight reducer	No	48		
49	110mm Ditto	No	45		
50	110mm Pan connector	No	19		
51	40mm Bend	No	95		
52	50mm Bend	No	102		
53	110mm Bend	No	39		
54	40mm Inspection eye bend	No	42		
55	50mm Ditto	No	80		
56	110mm Ditto	No	35		
57	40mm Junction	No	45		
58	50mm Ditto	No	25		
59	110mm Ditto	No	23		
60	40mm Inspection eye junction	No	26		
61	50mm Ditto	No	89		
62	110mm Ditto	No	24		
63	50mm Inspection eye reducing junction	No	38		
64	110mm Ditto	No	39		
65	110 x 110 x 40mm Access reducing junction.	No	45		
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Plumbing And Drainage					

		Unit	Quantity	Rate	Amount
66	110 x 110 x 50mm Access reducing double junction.	No	45		
67	110mm "GI two-way" vent valve	No	8		
	<b><u>Sundries</u></b>				
68	Wire balloon grating in top of pipe not exceeding 100mm diameter.	No	8		
69	50mm UPVC vent valve	No	8		
70	110mm Ditto	No	15		
	<b><u>TESTING</u></b>				
	<b><u>Testing :</u></b>				
71	Testing waste pipe system, complete.	Item			
	<b><u>WATER SUPPLIES</u></b>				
	<b><u>Note:</u></b>				
	Domestic Hot and Cold Water Pipes shall be Copper to SANS 460 Class 2 Hard Drawn. Copper piping and shall be joined by means of solder capillary fittings, in accordance with SABS specifications.				
	The exact position of Hot Water Pipework in ceiling voids shall be such that the length of "Dead Legs" are minimised.				
	<b><u>Class 2 Copper pipes:</u></b>				
72	15mm Pipes.	m	268		
73	22mm Pipes.	m	235		
74	28mm Pipes.	m	240		
75	35mm Pipes.	m	50		
76	42mm Pipes.	m	25		
77	54mm Pipes.	m	30		
78	63mm Pipes.	m	430		
	<b><u>Extra over class 2 copper pipes for capillary fittings:</u></b>				
79	15mm Fittings	No	193		
80	22mm Fittings	No	245		
81	28mm Fittings	No	280		
82	35mm Elbow	No	50		
83	35mm Reducer	No	32		
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	Plumbing And Drainage				

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		Unit	Quantity	Rate	Amount
106	Galvanised sheet iron tray to suit 100 litre geyser	No	1		
107	Ditto, to suit 200 litre geyser	No	1		
108	50mm UPVC overflow pipe	m	10		
109	Saint Gobian Isover insulation to 15mm pipe all in strict accordance with the manufacturers instructions	m	180		
110	22mm Ditto	m	235		
111	28mm Ditto	m	280		
<b><u>BUILDERS WORK IN CONNECTION WITH PLUMBING INSTALLATION</u></b>					
112	Cut hole through facebrick wall for pipe not exceeding 100mm diameter and make good	No	25		
113	Prepare surface and apply one undercoat and two coats gloss enamel paint to copper pipes not exceeding 300mm girth	m	218		
<b><u>FIRE APPLIANCES ETC</u></b>					
<b><u>'Chubb' or equally approved:</u></b>					
114	'Everyway' hose reel complete with 30m rubber hose, chromium plated stopcock, shut-off nozzle and wall bracket, mounted to wall, complete.	No	6		
115	4,5kg DCP hand held fire extinguisher including mounting bracket and backboard plugged and screwed to wall.	No	10		
116	5kg Carbon dioxide CO2 hand held fire extinguisher including mounting bracket and backboard plugged and screwed to wall.	No	10		
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**SECTION NO. 2**

**BUILDING WORKS**

**BILL NO. 12**

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	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 2</u></b> <b><u>BUILDING WORKS</u></b> <b><u>BILL NO. 14</u></b> <b><u>PAINTWORK</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.</p> <b><u>Paint:</u></b> <p>All work to be executed in strict accordance with the Manufacturers specifications and instructions.</p> <p>Primers and first coats may be thinned in accordance with the paint specifications of the various paints to aid the absorption of the paint.</p> <p>All surfaces must be sound, clean and have a moisture content of less than 8% for walls generally and 3% for slabs/screeds etc.</p> <p>Where surfaces of plaster etc are sandy / friable, the first coat must be replaced with a Merit' plaster primer thinned 10% with turpentine.</p> <b><u>PAINTWORK ETC TO NEW WORK</u></b> <b><u>ON FLOATED PLASTER SURFACES</u></b> <b><u>Prepare surfaces and remove all loose material, apply one coat plaster Primer and Two Coats Super Acrylic PVA Paint On:</u></b>				
1	m <sup>2</sup>	111		
2	m <sup>2</sup>	300		
<b><u>Prepare surfaces and remove all loose material, apply one coat Plascon Plaster Primer (UC56) filler coat, sand lightly and apply two coats 'Plascon Wall and All (WAA 1) Pure Acrylic' paint :</u></b>				
3	m <sup>2</sup>	2 502		
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		Unit	Quantity	Rate	Amount
4	External plastered walls	m <sup>2</sup>	125		
5	Drywall partitions	m <sup>2</sup>	455		
6	Gypsumboard firewalls	m <sup>2</sup>	845		
7	Internal plastered walls in narrow widths	m <sup>2</sup>	68		
	<u><b>Prepare Surface And Apply One Coat Primer And 2mm Thick "Marmoran" Resin Bonded Plaster Of Approved Colour Trowelled On In Strict Accordance With The Manufacturers Instructions</b></u>				
8	External plastered walls	m <sup>2</sup>	100		
9	External plastered walls in narrow widths	m <sup>2</sup>	25		
	<u><b>ON SMOOTH CONCRETE SURFACES</b></u>				
	<u><b>Specialist Floor Coating</b></u>				
	<u><b>Prepare Surface And Apply 4.5mm Thick Sikafloor-21N PurCem Polyurethane Floorcoating Of Approved Colour Applied Complete Including Primer Coat, Etc All In Strict Accordance With The Manufacturers Instructions (Product Must Have A 10 Year Guarantee And Certificate To Be Provided After Successful Installation Thereof) On:</b></u>				
10	Power floated concrete floors including any necessary grinding, etc	m <sup>2</sup>	30		
11	Extra over last for cutting and sealing all necessary joints	m	25		
	<u><b>ON METAL SURFACES</b></u>				
	<u><b>Prepare Surface And Apply one Coat Bituminous Paint On:</b></u>				
12	Backs of door linings before setting up in position	m <sup>2</sup>	41		
	<u><b>Prepare Surface And Apply One Coat Primer And Two Coats Velvagio Paint On:</b></u>				
13	Galvanised door frames	m <sup>2</sup>	45		
14	Record room door and frame	m <sup>2</sup>	4		
	<u><b>ON WOOD SURFACES</b></u>				
	<u><b>Prepare Surface And Apply One Coat Primer On:</b></u>				
15	Backs of frames not exceeding 300mm girth	m	14		

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**SECTION NO. 2**  
**BUILDING WORKS**  
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**PAINTWORK**  
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## **SECTION NO. 3**

## **EXTERNAL WORKS**



	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 3</u></b>				
<b><u>EXTERNAL WORKS</u></b>				
<b><u>BILL NO. 1</u></b>				
<b><u>SITE CLEARANCE AND BULK EARTHWORKS</u></b>				
The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities				
<b><u>SUPPLEMENTARY PREAMBLES</u></b>				
Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.				
<b><u>Top soil:</u></b>				
The contractor is required to implement the Topsoil Management Plan as outlined in the Environmental Management Plan (EMP). More details can be found in the Particular Specification.				
Note: All Earthworks shall be done in accordance with the SABS 1200 specifications.				
<b><u>GRASSING</u></b>				
<b><u>Ground preparation:</u></b>				
1				

	Unit	Quantity	Rate	Amount
<b><u>Fertilizing:</u></b>				
4 Fertilize garden top soil with 3:2:1 super phosphate spread at a rate of 1kg/10m <sup>2</sup> including working evenly into top 20mm depth of soil	m <sup>2</sup>	363		
<b><u>Grassing of Kikuyu grass or equally approved sods laid over site:</u></b>				
5 Kikuyu grass or equally approved sods approximately 500x500x50mm thick over topsoiled areas including watering and maintenance, etc until Practical Completion of the project, 3 months maintenance period after practical completion elsewhere measured	m <sup>2</sup>	363		
<b><u>Maintenance:</u></b>				
6 Maintenance of grassed and ground covered areas for a period of 3 months (total area approximately 1875m <sup>2</sup> including grassing to be done by SMME Sub-Contractor) including regularly weeding and irrigating as necessary.	Item			
<b><u>TEMPORARY BARRIERS, SCREENS, ETC</u></b>				
<b><u>Temporary barriers, screens, etc. including removal</u></b>				
7 Hoarding 2400mm high consisting of 150mm diameter tanalith treated timber posts strapped with stainless steel timber strapping, spaced at 3m centres and embedded in 20/19 Mpa mass concrete block size 400 x 400 x 550mm deep with sloping top surfaces of concrete and with embedded post wrapped in black DPC membrane including excavated base size 400 x 400 x 650mm deep, with 100mm sandbed, including clearing hoarding line, excavations, backfill, risk of collapse and carting away surplus material. Hoarding comprising 152 x 38mm tanalith treated timber battens at 1000mm centres fixed horizontally to poles and with and including IBR 0.58mm thick ISQ 300 Z275 galvanized steel side cladding sheeting with chromadek finish to one side and protective primer coating on reverse side fixed to battens by means of approved roofing screws at 600mm centres, including all corners, ends, etc. (all as per BVI Engineers drawing No. 33722-DET-17)	m	526		
<b><u>PREAMBLES</u></b>				
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Site Clearance And Bulk Earthworks				

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**EXTERNAL WORKS**

**BILL NO. 1**

**SITE CLEARANCE AND BULK EARTHWORKS**

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Site Clearance And Bulk Earthworks

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 3</u></b> <b><u>EXTERNAL WORKS</u></b> <b><u>BILL NO. 2</u></b> <b><u>SOIL DRAINAGE AND RETICULATION</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.</p> <p><b><u>uPVC pipes and fittings:</u></b>  Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings.  Soil, waste and vent pipes and fittings shall be solvent weld jointed.</p> <p><b><u>uPVC pressure pipes and fittings:</u></b>  All pipes shall be of the class stated.  Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings.  Pipes of 50mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be Upvc and all other fittings shall be cast iron, all with similar push-in type joints.</p> <p><b><u>Exposed concrete surfaces:</u></b>  Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster.</p> <p><b><u>Excavations:</u></b>  No claim for rock excavation will be entertained unless the Contractor has timeously notified the quantity surveyor thereof prior to backfilling.  'Soft rock' and 'hard rock' shall be as defined in 'Earthworks'.</p>				
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Soil Drainage And Reticulation				

	Unit	Quantity	Rate	Amount
<b><u>Laying, backfilling, bedding, etc of pipes:</u></b> Pipes shall be laid and bedded and trenches shall be carefully backfilled in cordance with manufacturers' instructions.  Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SANS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SAB.				
<b><u>SEWER RETICULATION</u></b>				
<b><u>uPVC Class 34 pipes:</u></b>				
1 110mm Pipe laid in trenches not exceeding 1m deep, including couplings in the running length, laid to falls on a 100mm thick selected granular bedding material as per SABS 1200LB, including all necessary excavations, back filling with imported material and compacting to 93% Modified AASHTO density and all necessary risk of collapse and de-watering of trenches.	m	50		
2 Ditto, but exceeding 1m not exceeding 2m deep	m	10		
3 160mm Pipe laid in trenches exceeding 1m and not exceeding 2m deep, including couplings in the running length, laid to falls on a 100mm thick selected granular bedding material as per SABS 1200LB, including all necessary excavations, back filling and and compacting to 93% Modified AASHTO density and all necessary risk of collapse and de-watering of trenches.	m	75		
4 Ditto, but exceeding 3m not exceeding 4mm deep	m	15		
5 160mm Diameter UPVC pipes vertically or ramped to cleaning eyes in concrete encasing (elsewhere measured), etc.	m	15		
<b><u>Extra over uPVC Class 34 pipes for fittings:</u></b>				
6 110mm Bend	No	10		
7 160mm Bend	No	25		
8 110mm Access bend	No	15		
9 160mm Access bend	No	10		
10 110mm Access junction	No	15		
11 160mm Access junction	No	18		
12 110mm Access reducing junction	No	21		
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Soil Drainage And Reticulation				

		Unit	Quantity	Rate	Amount
13	160mm Access reducing junction	No	25		
14	110mm Straight reducer	No	16		
15	160mm Straight reducer	No	12		
16	110mm End cap	No	2		
17	160mm End cap	No	2		
18	160 x 110mm Y-Junction	No	10		
19	160mm Y-Junction	No	15		
20	160mm Long radius bend	No	5		
	<b><u>Extra over uPVC Class 34 channels for fittings:</u></b>				
21	160mm Bend	No	5		
22	160mm Junction	No	5		
	<b><u>Manholes:</u></b>				
23	750mm Diameter manhole exceeding 1000mm and not exceeding 2000mm deep internally, the lower depth increased to 1000mm diameter internally and with and including 200mm thick reinforced concrete (25Mpa at 28 days in 19mm stone) cover slab projecting at 220mm beyond sides and with reinforced concrete (25Mpa at 28 days in 19mm stone) reducer slab (all as per BVI Engineers drawing No. 33722-DET-1)	No	1		
24	Ditto, but exceeding 2000mm deep not exceeding 3000mm deep	No	1		
25	1000mm Diameter manhole exceeding 1000mm and not exceeding 2000mm deep internally (all as per BVI Engineers drawing No. 33722-DET-1)	No	3		
26	Ditto, but exceeding 2000mm deep not exceeding 3000mm deep	No	1		
	<b><u>Gratings, covers, etc:</u></b>				
27	SABS 558 Type 2A manhole cover and modified frame	No	6		
	<b><u>Sundries:</u></b>				
28	Cast iron floor drain as 'Eze Flo 3720 or similar approved with and including short length of cast iron pipe with DN 100 adaptor with sewer kimberley socket, 110mm PVC gully "P" trap, encased in concrete (concrete elsewhere measured), etc (all as per BVI Engineers drawing No. 33722-DET-1)	No	4		
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		Unit	Quantity	Rate	Amount
29	150mm Cast Iron straight or skew rodding eye with ABC removable plate cover jointed to 160mm uPVC pipe and set in and including concrete (25Mpa) surround size 1000 x 1000 x 300mm thick with exposed surface trowelled smooth (all as per BVI Engineers drawing No. 33722-DET-1)	No	2		
30	Ditto, but flush with G5 layer works with and including concrete (25Mpa) surround 1300mm diameter overall with opening and rebate for and including SABS 558 Type 2A manhole cover and frame, complete including isolation joints, radial bars, etc., under buildings. (all as per BVI Engineers drawing No. 33722-DET-1)	No	1		
31	UPVC gulley trap complete with UPVC removable grating including encasing all round with cement concrete 15MPa and with standard precast concrete surround fitted on top including excavation, risk of collapse, fill in and ram, formwork, etc	No	3		
32	Precast concrete (Class 15Mpa) block size 210 x 210 x 75mm thick finished smooth on top and four edges with letters "I.E" formed in top, set in ground over top of inspection fitting	No	3		
33	Precast concrete pipeline marker 750mm above ground level and 750mm below ground level built into and including 550 x 550 x 600mm deep concrete base including all necessary excavations, formwork, reinforcement, carting away surplus excavated material, backfilling, lettering, signs, etc.,	No	5		
34	25Mpa Unreinforced concrete encasement to pipes and in thrust blocks in trenches at bends, tees, etc, including extra excavation, formwork, etc.	m <sup>3</sup>	3		
35	Tie existing 160mm diameter sewer pipe into existing sewer network including making good, etc.	No	1		
36	Cutting into sides of existing manhole for and connecting 160mm diameter uPVC pipe including inserting 110mm channel junction and making good concrete benching and manhole sides	No	1		
37	Excavate for, locate and cut into existing 160mm pipe exceeding 1.00 and not exceeding 2.00m deep, and insert end cap to one end (remainder of pipe will become redundant), backfill, etc	No	1		
	<b>Testing:</b>				
38	Testing sewer pipe system	Item			
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**SECTION NO. 3**

**EXTERNAL WORKS**

**BILL NO. 2**

**SOIL DRAINAGE AND RETICULATION**

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Soil Drainage And Reticulation



	Unit	Quantity	Rate	Amount
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		Unit	Quantity	Rate	Amount
<b><u>STORMWATER DRAINAGE (CPAP Work Group No 146)</u></b>					
<b><u>uPVC Class 34 pipes:</u></b>					
1	355mm Pipe laid in trenches not exceeding 1m deep, including couplings in the running length, laid to falls on a 100mm thick selected granular bedding material as per SABS 1200LB, including all necessary excavations, back filling with imported material and compacting to 93% Modified AASHTO density and all necessary risk of collapse and de-watering of trenches.	m	10		
2	Ditto, but exceeding 2m and not exceeding 3m deep	m	5		
<b><u>Extra over uPVC Class 34 pipes for fittings:</u></b>					
3	355mm Bend	No	2		
4	355mm Junction	No	2		
5	355mm Long radius bend	No	2		
<b><u>Reinforced precast concrete SABS (Class 100D) pipes including spigot socket joints and short lengths to falls in ground, including excavating, imported backfilling, compacting to 93% modified AASHTO dry density and including all necessary risk of collapse, working space, carting away of surplus material, dewatering of trenches, etc.:</u></b>					
6	450mm Diameter pipes laid in and including trenches exceeding 1m not exceeding 2m deep including 100mm selected granular material bedding below and 300mm selected fill material above pipe crown.	m	236		
7	Ditto, but exceeding 2m and not exceeding 3m deep	m	24		
8	600mm Diameter pipes laid in and including trenches exceeding 1m not exceeding 2m deep including 100mm selected granular material bedding below and 300mm selected fill material above pipe crown.	m	194		
9	Ditto, but exceeding 2m and not exceeding 3m deep	m	19		
10	750mm Diameter pipes laid in and including trenches exceeding 1m not exceeding 2m deep including 100mm selected granular material bedding below and 300mm selected fill material above pipe crown.	m	267		
11	Ditto, but exceeding 2m and not exceeding 3m deep.	m	30		
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Stormwater Drainage					

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		Unit	Quantity	Rate	Amount
20	Excavate for and build stormwater relax tank size 2850mm x 1500mm x exceeding 1000mm deep and not exceeding 2000mm deep internally with Type 2A manhole cover and frame (elsewhere measured), 1405mm x 800mm x 800mm concrete encasing (25Mpa at 28 days in 19mm stone) complete including all excavations, formwork, reinforcement, backfilling, compaction, etc. (all as per BVI Engineers drawing No. 33722-DET-2)	No	6		
21	Ditto, but exceeding 1000mm and not exceeding 2m deep internally	No	2		
22	Excavate for and build stormwater kerb inlet Type A exceeding 1000mm deep and not exceeding 2000mm deep internally complete including all channels, kerbs, transitions, excavations, formwork, reinforcement, backfilling, compaction, etc. (all as per BVI Engineers drawing No. 33722-DET-3)	No	1		
23	Ditto, but exceeding 2000mm not exceeding 3000mm deep	No	1		
24	Excavate for and build stormwater kerb inlet Type B exceeding 1000mm deep and not exceeding 2000mm deep internally complete including all channels, kerbs, transitions, excavations, formwork, reinforcement, backfilling, compaction, etc. (all as per BVI Engineers drawing No. 33722-DET-3)	No	1		
25	Ditto, but exceeding 2000mm not exceeding 3000mm deep	No	1		
26	Excavate for and build Erf channel stormwater inlet Type A size 740mm x 1500mm x exceeding 1000mm deep and not exceeding 2000mm deep internally with and including heavy duty lockable ductile iron manhole cover and frame (Rexel with standard MK2 RISI) complete including all excavations, formwork, reinforcement, backfilling, compaction, etc. (all as per BVI Engineers drawing No. 33722-DET-4)	No	1		
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Stormwater Drainage					

		Unit	Quantity	Rate	Amount
27	Excavate for and build bellmouth entrance drain size 900mm x 900mm x not exceeding 1000mm deep internally with Type 2A manhole cover and frame (elsewhere measured), with inflow trench size 2750mm x 500mm x not exceeding 1000mm deep internally covered with and including "RECTAGRID RS40" 60 x 5mm or equally approved galvanised grid cover complete including all channels, kerbs, transitions, excavations, formwork, reinforcement, backfilling, compaction, etc. (all as per BVI Engineers drawing No. 33722-DET-14)	No	1		
	<b><u>Cast iron gratings, covers, etc.</u></b>				
28	S.A.B.S 558 Type 2A adjustable road manhole cover and frame	No	12		
29	Lifting-key for manhole cover (handed to employer)	No	2		
	<b><u>Sundries:</u></b>				
30	Excavate for, locate and cut into sides of existing manhole for and connecting 600mm diameter including making good concrete benching and manhole sides.	No	2		
31	Excavate for, locate and connect 600mm diameter stormwater pipe into existing stormwater network including making good, etc.	No	2		
32	Excavate for, locate and cut into existing 750mm pipe exceeding 1000mm and not exceeding 2000mm deep for construction of new manhole (elsewhere measured)	No	1		
33	Earth berm size 750 x 300 x 300mm high overall consisting of compacted G5 earth fill material, 150mm thick top soil and grassed with Kikuyu grass (all as per BVI Engineers drawing No. 33722-DET-4)	m	15		
34	25Mpa Unreinforced concrete encasement to pipes and in thrust blocks in trenches at bends, tees, etc, including extra excavation, formwork, etc.	m <sup>3</sup>	4		
	<b><u>Testing:</u></b>				
35	Testing stormwater drainage pipe system.	Item			
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**EXTERNAL WORKS**

**BILL NO. 3**

**STORMWATER DRAINAGE**

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Stormwater Drainage

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 3</u></b> <b><u>EXTERNAL WORKS</u></b> <b><u>BILL NO. 4</u></b> <b><u>WATER AND FIRE RETICULATION</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.</p> <b><u>uPVC pressure pipes and fittings:</u></b> <p>Pipes for water supply shall be of the class stated.</p> <p>Pipes of 50mm diameter and greater shall be to SABS 966 and 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 or cast steel as recommended by the manufacturer of the pipe, all with similar push-in type joints.</p> <b><u>Reducing fittings:</u></b> <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> <b><u>Corrosion Protection:</u></b> <p>External protection of all underground steel pipes, flanges, joints and couplings shall be by means of a 300 micron layer of coaltar epoxy of an approved make. External protection of all above ground steel pipes, flanges, joints and couplings shall be by means of a zinc coating. The finished surface shall be clean and uniform any excess being removed. The zinc deposit shall exceed 0.735 kg/m<sup>3</sup>.</p>				
Carried to Collection			R	
Section No. 3 Bill No. 4 Water And Fire Reticulation				

	Unit	Quantity	Rate	Amount
<p><b><u>Joints, Bolts, Nuts and Washers:</u></b></p> <p>Bolts, nuts and washers shall be treated as follows:</p> <p>Bolts and nuts shall be cadmium plated to BS 1706 and shall conform to grade 4.6 of SABS 135 and BS 916.</p> <p>Plain and tapered washers for use with mild steel bolts and nuts shall comply with BS 4320 and will be electro-galvanised to BS 1706.</p> <p>Plain and tapered washers for use with high tensile steel bolts and nuts shall be case hardened with a minimum hardness of Rockwell C-35.</p> <p><b><u>Corrosive Soil:</u></b></p> <p>All buried steel pipework and connections to be "DENSO" wrapped.</p> <p>Fittings and joints shall be protected with 'Denso Tape' or similar approved material.</p> <p>After the joints and fittings have been tested, they shall be liberally and completely coated with 'Denso Paste' and immediately thereafter wrapped with 'Denso Tape'. Wrapping shall commence at a point at least 50mm beyond the opposite side of the joint or fitting. An overlap of at least 25mm shall be given on each turn.</p> <p>Care shall be taken to smooth down the tape so as to avoid air pockets and gaps through which water could penetrate. Any turned or damaged tape shall be replaced or patched to the satisfaction of the Engineer's Representative. The Contractor shall ensure that the wrapping is not damaged during backfilling.</p> <p><b><u>Galvanising:</u></b></p> <p>Galvanised steel pipework, fittings, specials etc. Shall comply with SABS 934 and 763 and be entirely coated with zinc after fabrication by complete immersion in a zinc bath. The finished surface shall be clean and uniform and any excess being removed. The zinc deposit shall exceed the following.</p> <p>Coastal areas    0.735 kg/m<sup>3</sup></p> <p>Inland areas     0.400 kg/m<sup>3</sup></p> <p>"Coastal areas" shall apply to this contract unless specified otherwise."</p> <p><b><u>'Valves, etc':</u></b></p> <p><b><u>Note:</u></b></p> <p>All valves shall be coated and lined by means of a powder (sintered) epoxy coating with a dry film thickness of at least 250 micron without holidays.</p>				
Carried to Collection			R	
Section No. 3				
Bill No. 4				
Water And Fire Reticulation				



	Unit	Quantity	Rate	Amount
<p>All valves, connecting pipe specials and fittings that show any surface corrosion shall be cleaned and protected to the Engineer's satisfaction.</p> <p>Sluice Valves shall be the resilient seal type water works pattern gate valve able to operate successfully under a maximum unbalanced static pressure of 1.6MPa. The valve body and other components shall comply with SABS 664/665, the valve shall be of the nonrising spindle type with clockwise closing and generally plain ended for installation in uPVC pipe lines.</p> <p>Valves shall all be provided with spindle caps for use with keys unless stated or indicated to the contrary.</p> <p>The valve gate shall be covered with a Nitrile rubber resilient seal. Spindles shall be manufactured from heat treated stainless steel grade 420S29, bonnet and gate shall be manufactured out of Spheroidal Graphite Iron Grade 420/12.</p> <p>All graphite iron and steel surfaces to be epoxy powder coated.</p> <p><b><u>Testing of Valves</u></b></p> <p>All valves shall be pressure tested according to SABS 664 or other applicable code at the appropriate test pressure.</p> <p>No separate payment shall be made for testing of valves and hydrants and the scheduled rates for the supply and installation of valves shall include for all costs in respect of testing.</p> <p><b><u>Disinfecting:</u></b></p> <p>All pipes are to be disinfected to a free chlorine count of 8 parts per million.</p> <p>Prior to commissioning any water retaining structure, the Contractor will disinfect the inside of the entire structure by brooming down all the areas that will be in contact with water when in use with a chlorine solution of 10 parts per million. After proper disinfection to the satisfaction of the Engineer, the reservoir, tank or sump will be filled to the full supply level with purified water of 3ppm chlorine concentration and properly closed to prevent the intrusion of foreign matter.</p> <p>All pipe diameters are nominal external.</p> <p><b><u>Fixing of pipes</u></b></p> <p>Fittings and joints shall be protected with 'Denso Tape' or similar approved material.</p>				
<p>Carried to Collection</p>				
<p>Section No. 3</p> <p>Bill No. 4</p> <p>Water And Fire Reticulation</p>				
<p>100</p>				

R

	Unit	Quantity	Rate	Amount
<p>After the joints and fittings have been tasted, they shall be liberally and completely coated with 'Denso Paste' and immediately thereafter wrapped with 'Denso Tape'. Wrapping shall commence at a point at least 50mm beyond the opposite side of the joint or fitting. An overlap of at least 25mm shall be given on each turn.</p> <p>Care shall be taken to smooth down the tape so as to avoid air pockets and gaps through which water could penetrate. Any turned or damaged tape shall be replaced or patched to the satisfaction of the Engineer's Representative. The Contractor shall ensure that the wrapping is not damaged during backfilling.</p> <p><b><u>Pipeline Markers:</u></b></p> <p>Where so instructed by the Engineer or as shown on the drawings, the Contractor shall erect pipeline markers. These markers will be precast concrete units manufactured out of 25Mpa concrete to the dimensions shown on the drawings and shall comply with SABS 1200 GA Concrete.</p> <p>All markers to receive one primer coat followed by two coats of venamel based paint, colour blue, once erected.</p> <p>Markers are to be erected 300mm off the edge of the pipe trench to the left of the trench and at right angles to the trench centre line at the points as indicated on the pipe longsections.</p> <p>At bends the marker will be erected at the P.I. Point of these 300 mm offset lines.</p> <p><b><u>Depth and Cover:</u></b></p> <p>Depth of excavation for pipe trenches shall be as per the drawing. The minimum required cover to the top of collars shall be 600mm.</p> <p><b><u>Excavations:</u></b></p> <p>No claim for rock excavation 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><b><u>Laying, backfilling, bedding, etc of pipes:</u></b></p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' and Engineers instructions.</p>				
Carried to Collection			R	
Section No. 3 Bill No. 4 Water And Fire Reticulation				

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	Unit	Quantity	Rate	Amount
Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SANS 1200 L : Medium pressure pipelines LD : Sewers LE : Stormwater drainage Pipe trenches etc shall be backfilled in accordance with clause 3, 5.5, 5.6, 5.7 and 7 of SABS.				
<b><u>WATER SUPPLIES</u></b>				
All pipe diameters are nominal external.				
<b><u>uPVC Class 9 pipes pressure pipes with spigot and socket joints</u></b>				
1 50mm Pipe laid in trenches not exceeding 1m deep, including couplings in the running length, laid to falls on a 100mm thick selected granular bedding material as per SABS 1200LB, 375mm imported fill material including all necessary excavations, back filling with imported fill material and compacting to 95% Modified AASHTO density and all necessary risk of collapse and de-watering of trenches.	m	65		
2 Ditto, but exceeding 1m but not exceeding 2m deep	m	16		
3 75mm Pipe laid in trenches not exceeding 1m deep, including couplings in the running length, laid to falls on a 100mm thick selected granular bedding material as per SABS 1200LB, 375mm imported fill material including all necessary excavations, back filling with imported fill material and compacting to 95% Modified AASHTO density and all necessary risk of collapse and de-watering of trenches.	m	35		
4 Ditto, but exceeding 1m but not exceeding 2m deep	m	8		
5 110mm Pipe laid in trenches not exceeding 1m deep, including couplings in the running length, laid to falls on a 100mm thick selected granular bedding material as per SABS 1200LB, 375mm imported fill material including all necessary excavations, back filling with imported fill material and compacting to 95% Modified AASHTO density and all necessary risk of collapse and de-watering of trenches.	m	76		
6 Ditto, but exceeding 1m but not exceeding 2m deep	m	25		
Carried to Collection			R	
Section No. 3				
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Water And Fire Reticulation				

		Unit	Quantity	Rate	Amount
7	160mm Pipe laid in trenches not exceeding 1m deep, including couplings in the running length, laid to falls on a 100mm thick selected granular bedding material as per SABS 1200LB, 375mm imported fill material including all necessary excavations, back filling with imported fill material and compacting to 95% Modified AASHTO density and all necessary risk of collapse and de-watering of trenches.	m	15		
8	Ditto, but exceeding 1m but not exceeding 2m deep	m	4		
	<b><u>Extra over Class 9 uPVC pressure pipes for cast iron pressure fittings:</u></b>				
9	50mm 11.25 degree Bend	No	20		
10	75mm 11.25 degree Bend	No	12		
11	110mm 11.25 degree Bend	No	15		
12	160mm 11.25 degree Bend	No	3		
13	50mm 22.5 degree Bend	No	15		
14	75mm 22.5 degree Bend	No	5		
15	110mm 22.5 degree Bend	No	12		
16	160mm 22.5 degree Bend	No	3		
17	50mm 45 degree Bend	No	15		
18	75mm 45 degree Bend	No	3		
19	110mm 45 degree Bend	No	6		
20	160mm 45 degree Bend	No	2		
21	50mm 90 degree Bend	No	8		
22	75mm 90 degree Bend	No	5		
23	110mm 90 degree Bend	No	10		
24	160mm 90 degree Bend	No	2		
25	50mm End cap	No	1		
26	75mm End cap	No	1		
27	110mm End cap	No	1		
28	160mm End cap	No	1		
29	50mm Equal Tee	No	12		
30	75mm Equal Tee	No	2		
	Carried to Collection			R	
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	Water And Fire Reticulation				

		Unit	Quantity	Rate	Amount
31	110mm Equal Tee	No	3		
32	160mm Equal Tee	No	2		
33	75 x 50mm Reducer	No	4		
34	110 x 160mm Reducer	No	2		
35	75 x 75 x 50mm Reducing Tee	No	5		
36	50 x 50 x 75mm Reducing Tee	No	2		
37	50mm Saddle including nuts and bolts and drilling boss and pipe.	No	5		
38	75mm Saddle including nuts and bolts and drilling boss and pipe.	No	2		
<b><u>Sundries</u></b>					
<b><u>Water meter, valves and pipe fittings within and around the meter chamber - all as per BVI Engineers drawing No. 33722-DET-5</u></b>					
39	Galvanised pipe size 80mm Diameter x 524mm long with flanged ends.	No	1		
40	Galvanised pipe size 80mm Diameter x 250mm long with flanged end.	No	2		
41	Galvanised pipe size 100mm Diameter x 893mm long with flanged pipe.	No	1		
42	100mm Diameter Cast Iron flange adaptor	No	2		
43	110mm Diameter Cast Iron flange adaptor	No	2		
44	160mm Diameter Cast Iron flange adaptor	No	2		
45	150 x 80mm Flanged steel reducer	No	2		
46	100mm Diameter Viking Johnson or equally approved flanged adaptor	No	1		
47	80mm 'SENSUS' combination water meter with flanges drilled to table 16 and bolted joints.	No	1		
48	80mm Diameter RSV left hand closing cast iron gate valve with flanged ends	No	2		
49	100mm Diameter RSV left hand closing cast iron gate valve with flanged ends	No	2		
Carried to Collection				R	
Section No. 3					
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Water And Fire Reticulation					

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		Unit	Quantity	Rate	Amount
50	100mm Diameter swing type non-return valve with 16 bar operating pressure and with flanged ends	No	2		
51	1960 x 1260mm Type-A brick valve and meter chamber not exceeding 1000mm deep internally consisting of SABS 558 Type 2A cast iron cover and frame size 600mm diameter and SABS 558 Type 7 valve access cover and frame including excavations, backfilling, carting away surplus material, etc	No	2		
52	2375 x 1240mm Type-B brick valve chamber not exceeding 1000mm deep internally consisting of SABS 558 Type 2A cast iron cover and frame size 600mm diameter including excavations, backfilling, carting away surplus material, etc	No	2		
<b><u>WATER SUPPLIES TO FIRE APPLIANCES</u></b>					
<b><u>uPVC Class 20 pressure pipes encased in reinforced precast concrete SABS (Class 100D) pipes with bolted flange joints and steel spider supports - all as per BVI Engineers drawing No. 33722-DET-15</u></b>					
53	315mm uPVC Class 20 pipe encased in 600mm reinforced precast concrete SABS (Class 100D) pipe with interlocking joints laid in trenches exceeding 1m deep and not exceeding 2m deep, including steel spiders carriers at 3m centres including all necessary excavations, back filling and compacting to 93% Modified AASHTO density and all necessary risk of collapse and de-watering of trenches	m	96		
<b><u>uPVC Class 12 pipes pressure pipes with spigot and socket joints</u></b>					
54	75mm Pipe laid in trenches not exceeding 1m deep, including couplings in the running length, laid to falls on a 100mm thick selected granular bedding material as per SABS 1200LB, 375mm selected fill material including all necessary excavations, back filling with imported fill material and compacting to 93% Modified AASHTO density and all necessary risk of collapse and de-watering of trenches.	m	212		
55	Ditto, but exceeding 1m but not exceeding 2m deep	m	21		
Carried to Collection				R	
Section No. 3					
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Water And Fire Reticulation					

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		Unit	Quantity	Rate	Amount
56	110mm Pipe laid in trenches not exceeding 1m deep, including couplings in the running length, laid to falls on a 100mm thick selected granular bedding material as per SABS 1200LB, 375mm selected fill material including all necessary excavations, back filling with imported fill material and compacting to 93% Modified AASHTO density and all necessary risk of collapse and de-watering of trenches.	m	96		
57	Ditto, but exceeding 1m but not exceeding 2m deep	m	19		
	<b><u>Extra over Class 12 uPVC pressure pipes for cast iron fittings:</u></b>				
58	75mm Bend	No	35		
59	110mm Bend	No	24		
60	75mm End cap	No	1		
61	110mm End cap	No	1		
62	75mm Equal Tee	No	6		
63	110mm Equal Tee	No	3		
64	75 x 110mm Reducer	No	3		
65	110 x 110 x 75mm Reducing Tee	No	5		
66	75 x 75 x 110mm Reducing Tee	No	5		
67	32mm Flange Adaptor	No	8		
68	75mm Flange Adaptor	No	6		
69	75mm Saddle including nuts and bolts and drilling boss and pipe.	No	6		
70	110mm Saddle including nuts and bolts and drilling boss and pipe.	No	4		
	<b><u>uPVC Class 20 pipes pressure pipes with spigot and socket joints</u></b>				
71	250mm Pipe laid in trenches not exceeding 1m deep, including couplings in the running length, laid to falls on a 100mm thick selected granular bedding material as per SABS 1200LB, 375mm selected fill material including all necessary excavations, back filling and compacting to 93% Modified AASHTO density and all necessary risk of collapse and de-watering of trenches (Sprinkler Main)	m	96		
72	Ditto, but exceeding 1m but not exceeding 2m deep	m	15		
	Carried to Collection				
	Section No. 3				
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	Water And Fire Reticulation				
				R	

		Unit	Quantity	Rate	Amount
73	315mm Pipe laid in trenches not exceeding 1m deep, including couplings in the running length, laid to falls on a 100mm thick selected granular bedding material as per SABS 1200LB, 375mm selected fill material including all necessary excavations, back filling and compacting to 93% Modified AASHTO density and all necessary risk of collapse and de-watering of trenches (Sprinkler Main)	m	50		
74	Ditto, but exceeding 1m but not exceeding 2m deep	m	13		
	<b><u>Extra over Class 20 uPVC pressure pipes for cast iron pressure fittings:</u></b>				
75	250mm Bend	No	5		
76	315mm Bend	No	4		
77	250mm End cap	No	2		
78	315mm End cap	No	1		
79	250mm Equal Tee	No	5		
80	315mm Equal Tee	No	2		
81	315 x 110mm Reducer	No	2		
82	250 x 110m Reducer	No	2		
83	315 x 250mm Reducer	No	1		
84	250mm Flange Adaptor	No	1		
85	315mm Flange Adaptor	No	1		
86	250 x 250 x 110mm Reducing Tee	No	2		
87	315 x 315 x 110mm Reducing Tee	No	1		
88	315 x 315 x 250mm Reducing Tee	No	1		
	<b><u>Galvanised steel pipes with screwed and flanged joints</u></b>				
	<b><u>Galvanised steel pipes with screwed and flanged joints including wrapid bond wrapping to underground pipe fittings- all as per BVI Engineers drawing No. 33722-DET-18 (BSC)</u></b>				
89	32mm Diameter x 1601mm pipe with one end butt welded to bend	No	1		
90	Ditto, but 2152mm long	No	1		
91	Ditto, but 500mm long	No	2		
	Carried to Collection			R	
	Section No. 3				
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	Water And Fire Reticulation				



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		Unit	Quantity	Rate	Amount
92	75mm Diameter x 1036mm pipe with one end butt welded to bend	No	1		
93	Ditto, but 430mm long	No	1		
94	100mm Diameter x 1928mm pipe with one end butt welded to bend	No	1		
95	Ditto, but 1458mm long	No	1		
96	Ditto, but 500mm long	No	1		
97	250mm Diameter x 1189mm pipe with one end butt welded to bend	No	1		
98	Ditto, but 500mm long	No	1		
99	32mm 90 Radius Bend	No	1		
100	75mm 90 degree radius bend	No	1		
101	100mm 90 degree radius bend	No	1		
102	250mm 90 degree radius bend	No	1		
103	32mm PVC flange adapter	No	1		
104	75mm PVC flange adapter	No	1		
105	100mm PVC flange adapter	No	1		
106	250mm PVC flange adapter	No	1		
107	32mm G.I puddle flange	No	1		
108	75mm G.I puddle flange	No	1		
109	100mm G.I puddle flange	No	1		
110	250mm G.I puddle flange	No	1		
	<b><u>Sundries:</u></b>				
	Valves and pipe fittings within and around the valve chamber				
111	80mm Diameter RSV cast iron gate valve with socket ends Class 16 Left hand closing including bolts, nuts and packing flanges to be SABS 1123 T10, to fire reticulation (all as per BVI Engineers drawing No. 33722-DET-16)	No	4		
112	80mm 'VENTOMAT RBX' or equally approved PN25 air-valve including joints to pipes (all as per BVI Engineers drawing No. 33722-DET-16)	No	1		
	Carried to Collection			R	
	Section No. 3				
	Bill No. 4				
	Water And Fire Reticulation				

		Unit	Quantity	Rate	Amount
113	150mm Diameter RSV cast iron gate valve with socket ends Class 16 Left hand closing including bolts, nuts and packing flanges to be SABS 1123 T10, to fire reticulation (all as per BVI Engineers drawing No. 33722-DET-9)	No	2		
114	Galvanised steel pipe size 80mm Diameter x 575mm long with one end flanged and the other to suit pipeline tee flange with bottom end denso wrapped (all as per BVI Engineers drawing No. 33722-DET-16) (6)	No	1		
115	315mm Cast iron flange adaptor	No	2		
116	50mm uPVC vent pipe	m	15		
117	Glavanised steel 315mm diameter flanged equal tee (all as per BVI Engineers drawing No. 33722-DET-16)	No	1		
118	1440 x 1440mm Brick valve chamber not exceeding 1000mm deep internally consisting of Type 4 cast iron cover and frame size 550mm diameter including excavations, backfilling, carting away surplus material, etc. (all as per BVI Engineers drawing No. 33722-DET-16)	No	5		
119	Precast concrete valve chamber for 150mm valve with and including precast concrete cover including excavations, backfilling, carting away surplus material, etc. (all as per BVI Engineers drawing No. 33722-DET-9)	No	2		
120	Precast concrete pipeline marker block size 200 x 200mm including lettering (all as per BVI Engineers drawing No. 33722-DET-9)	No	14		
121	15Mpa Concrete encasement to pipes or thrustblocks including formwork, etc.	m <sup>3</sup>	6		
<b><u>FIRE HYDRANTS, ETC.</u></b>					
<b><u>Fire Hydrants, etc:</u></b>					
122	80 x 65mm "Woodlands Type" or equally approved brass right-angle hydrant valve with cap and chain	No	3		
123	100 x 80mm brass double booster pump connection and Y-piece, with caps and chains	No	3		
124	100 x 80mm "Woodlands Type" or equally approved brass single booster pump connection and bend, with 80 x 15 bar pressure gauge, 100 x 80mm screwed bushing, caps and chains.	No	3		
Carried to Collection				R	
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Water And Fire Reticulation					

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		Unit	Quantity	Rate	Amount
125	80mm Hydrant tee drilled to table 16, including connecting bolts, gaskets, etc.	No	3		
126	Supply of hydrant key	No	3		
	<b><u>Fire hydrant pedestals:</u></b>				
127	Reinforced concrete 25Mpa/19mm hydrant pedestal 700mm high cast around vertical 80mm galvanised steel water pipe with bottom 1000mm minimum below ground level, 440 x 440mm square at base and tapering to octagonal shaped top 240 x 240mm overall including all necessary excavation, smooth off shutter formwork, concrete, 4 x Y12 reinforcing bars vertically, finished smooth off shutter and painted two coats of approved golden yellow paint to exposed surfaces (price to include all pipes and fittings up to hydrant valve) (all as per BVI Engineers drawing No. 33722-DET-9)	No	3		
128	Reinforced concrete 25Mpa/19mm booster pedestal 800mm high cast around vertical pipe with bottom 600mm minimum below ground level, 340 x 340mm square at base and tapering to octagonal shaped top 210 x 210mm overall including all necessary excavation, smooth off shutter formwork, concrete, 4 x Y12 reinforcing bars vertically, finished smooth off shutter and painted two coats of approved golden yellow paint to exposed surfaces (price to include all pipes and fittings up to booster connection) (all as per BVI Engineers drawing No. 33722-DET-9)	No	1		
	<b><u>TESTING</u></b>				
	<b><u>Testing:</u></b>				
129	Testing complete water and fire pipe line systems.	Item			
Carried to Collection				R	
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**SECTION NO. 3**

**EXTERNAL WORKS**

**BILL NO. 4**

**WATER AND FIRE RETICULATION**

**COLLECTION**

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Section No. 3

Bill No. 4

Water And Fire Reticulation

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 3</u></b> <b><u>EXTERNAL WORKS</u></b> <b><u>BILL NO. 5</u></b> <b><u>SUBSOIL DRAINAGE</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.</p> <b><u>NOTE:</u></b> <p>Where items in the Bill are identical to those in the previous Bills, the descriptions have been shortened and the Supplementary Preambles omitted, and therefore the full descriptions in the Trades concerned together with the relevant Supplementary Preambles are to be referred to for the full meaning and intent of each item.</p> <b><u>SUBSOIL DRAINAGE (CPAP WORK GROUP NO. 146)</u></b> <b><u>Subsoil drainage:</u></b>				
1	m	294		
<b><u>Megaflow MEG 315 Geocomposite Panel Drain System</u></b>				
2	m	1 998		
3	No	1 199		
Carried to Collection			R	
Section No. 3 Bill No. 5 Subsoil Drainage				

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		Unit	Quantity	Rate	Amount
	<b><u>Sundries:</u></b>				
4	110mm Diameter Cast Iron A.B.C straight or skew cleaning eye with removable plate cover jointed to 100mm unperforated pipe and set in and including concrete 25Mpa/19mm surround size 600 x 600 x 325mm thick with exposed surface trowelled smooth including all excavations, formwork, reinforcement, backfilling, compaction, etc. (all as per BVI Engineers drawing No. 33722-DET-7)	No	6		
5	100mm Polypropylene pipes vertically or ramped to cleaning eyes in and including 400mm x 600mm concrete encasing (25Mpa at 28 days in 19mm stone), etc. including all excavations, backfilling, compaction, etc.	m	15		
6	100mm Polypropylene Y-junction with ring seal joints	No	6		
Carried to Collection				R	
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Subsoil Drainage					

**SECTION NO. 3**

**EXTERNAL WORKS**

**BILL NO. 5**

**SUBSOIL DRAINAGE**

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Bill No. 5

Subsoil Drainage

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 3</u></b>				
<b><u>EXTERNAL WORKS</u></b>				
<b><u>BILL NO. 6</u></b>				
<b><u>RETAINING STRUCTURES</u></b>				
<b><u>PREAMBLES</u></b>				
The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities				
<b><u>SUPPLEMENTARY PREAMBLES</u></b>				
Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.				
<b><u>NOTE:</u></b>				
Where items in the Bill are identical to those in the previous Bills, the descriptions have been shortened and the Supplementary Preambles omitted, and therefore the full descriptions in the Trades concerned together with the relevant Supplementary Preambles are to be referred to for the full meaning and intent of each item.				
<b><u>CONCRETE RETAINING WALLS</u></b>				
<b><u>Open face excavation in earth</u></b>				
1 To embankment behind retaining wall including trimming to slope	m <sup>3</sup>	26		
<b><u>Excavation in earth not exceeding 2m deep</u></b>				
2 Trenches	m <sup>3</sup>	363		
<b><u>Extra over for excavation in</u></b>				
3 Soft rock	m <sup>3</sup>	18		
4 Hard rock	m <sup>3</sup>	11		
<b><u>Risk of collapse of excavations</u></b>				
5 Sides of trench and hole excavations not exceeding 1,5m deep	m <sup>2</sup>	234		
Carried to Collection			R	
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Retaining Structures				



		Unit	Quantity	Rate	Amount
	<b><u>Keeping excavations free of water</u></b>				
6	Keeping excavations free of all water other than subterranean water	Item			
	<b><u>Extra over all excavations for carting away</u></b>				
7	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m <sup>3</sup>	22		
	<b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density</u></b>				
8	To form embankments for retaining structures	m <sup>3</sup>	117		
	<b><u>Earth filling of G7 material supplied by the contractor, compacted to 95% Mod AASHTO density</u></b>				
9	Backfilling behind retaining walls	m <sup>3</sup>	702		
	<b><u>15MPa/19mm Unreinforced concrete cast against excavated surface</u></b>				
10	Surface blinding under footings and bases	m <sup>3</sup>	18		
	<b><u>30MPa/19mm Unreinforced concrete cast in against excavated surface</u></b>				
11	Strip footings	m <sup>3</sup>	199		
	<b><u>30MPa/19mm Reinforced concrete cast in formwork</u></b>				
12	Retaining walls	m <sup>3</sup>	376		
	<b><u>Test blocks</u></b>				
13	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes (Provisional).	No	40		
	<b><u>Finishing top surfaces of concrete smooth with a wood float</u></b>				
14	Tops of retaining walls, etc.	m <sup>2</sup>	56		
	<b><u>Smooth formwork to sides (Degree of Accuracy II)</u></b>				
15	Retaining walls with total height exceeding 5m and not exceeding 6.5m above bearing level	m <sup>2</sup>	1 498		
16	Edges exceeding 300mm high	m <sup>2</sup>	7		
	<b><u>Boxing in special formwork to form:</u></b>				
17	25 x 25mm Chamfers along top or bottom edges	m	234		
	<b><u>Mild steel reinforcement to structural concrete work</u></b>				
18	8mm Diameter bars	Tonnes	9.86		
	Carried to Collection			R	
	Section No. 3				
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	Retaining Structures				

		Unit	Quantity	Rate	Amount
19	10mm Diameter bars	Tonnes	4.60		
	<b><u>High tensile steel reinforcement to structural concrete work</u></b>				
20	10mm Diameter bars	Tonnes	9.86		
21	12mm Diameter bars	Tonnes	9.20		
22	16mm Diameter bars	Tonnes	9.20		
23	20mm Diameter bars	Tonnes	9.20		
24	25mm Diameter bars	Tonnes	9.46		
25	32mm Diameter bars	Tonnes	1.97		
	<b><u>Subsoil drainage</u></b>				
26	Sub soil drain laid behind retaining wall in conjunction with backfilling formed of 100mm diameter Kaytech Flow Drain with 1000mm high Kaytech 525 Flownet above all covered with Bidim A3	m	117		
27	75mm Diameter pvc weep pipe 400mm long cast into position through concrete retaining wall	No	1		
	<b><u>Apply two coats bituminous paint</u></b>				
28	Backs of retaining walls	m <sup>2</sup>	749		
	<b><u>PRECAST CONCRETE STACK BLOCK RETAINING WALLS</u></b>				
	<b><u>Open face excavation in earth</u></b>				
29	To embankment behind retaining wall including trimming to slope	m <sup>3</sup>	80		
	<b><u>Excavation in earth not exceeding 2m deep</u></b>				
30	Trenches	m <sup>3</sup>	5		
	<b><u>Extra over for excavation in</u></b>				
31	Soft rock	m <sup>3</sup>	1		
32	Hard rock	m <sup>3</sup>	1		
	<b><u>Risk of collapse of excavations</u></b>				
33	Sides of trench and hole excavations not exceeding 1,5m deep	m <sup>2</sup>	8		
	<b><u>Keeping excavations free of water</u></b>				
34	Keeping excavations free of all water other than subterranean water	Item			
Carried to Collection				R	
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Retaining Structures					

		Unit	Quantity	Rate	Amount
	<b><u>Extra over all excavations for carting away</u></b>				
35	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m <sup>3</sup>	5		
	<b><u>Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 93% Mod AASHTO density</u></b>				
36	To form embankments for retaining structures	m <sup>3</sup>	40		
	<b><u>Earth filling of G5 material supplied by the contractor, compacted to 93% Mod AASHTO density</u></b>				
37	Backfilling behind retaining walls in 200mm layers	m <sup>3</sup>	40		
	<b><u>15MPa/19mm Unreinforced concrete cast against excavated surface</u></b>				
38	Surface blinding under footings and bases	m <sup>3</sup>	1		
	<b><u>25MPa/16mm Unreinforced concrete cast against excavated surface</u></b>				
39	Strip footings	m <sup>3</sup>	5		
	<b><u>Subsoil drainage</u></b>				
40	Sub soil drain laid behind stack block wall in conjunction with backfilling formed of 100mm diameter Kaytech Flow Drain with 1000mm high Kaytech 525 Flownet above all covered with Bidim A3	m	50		
41	Kaymat U24 or equally approved non-woven continuous filament needle punch polyester filter fabric behind precast concrete stack blocks retaining walls including maintaining in position during backfilling (backfilling elsewhere measured).	m <sup>2</sup>	40		
	<b><u>Precast concrete interlocking planter blocks finished smooth on exposed surfaces</u></b>				
42	Retaining wall formed of "Terraforce V8" standard blocks of 400 x 500 x 250mm high overall laid in close configuration including filing blocks with garden soil lightly tamped as the work proceeds (backfilling and trimming of banks elsewhere measured).	m <sup>2</sup>	48		
	<b><u>EARTH BERM AND STORM WATER CHANNELS</u></b>				
	<b><u>Earth berm:</u></b>				
43	Earth berm size 1500 x 500 x 500mm high overall consisting of compacted G5 earth fill material, 150mm thick top soil and grassed with Kikuyu grass (all as per BVI Engineers drawing No. 33722-DET-13)	m	40		
Carried to Collection				R	
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**SECTION NO. 3**

**EXTERNAL WORKS**

**BILL NO. 6**

**RETAINING STRUCTURES**

**COLLECTION**

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Bill No. 6

Retaining Structures

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 3</u></b> <b><u>EXTERNAL WORKS</u></b> <b><u>BILL NO. 7</u></b> <b><u>ROADS AND PARKINGS</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.</p> <b><u>Nature of ground</u></b> <p>A soils investigation has been carried out on the site by the engineer and the report is annexed to these bills of quantities. The soils report indicates that the ground varies between silty sand, reworked soil of mixed origin and residual shale, all of which will be deemed as 'earth'. All very hard unweathered shale, ironstone, etc., the removal of which necessitates the use of explosives or heavy duty hydraulic percussion hammers (peckers), will be classified as 'hard rock'</p> <b><u>Carting away of excavated material</u></b> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p> <b><u>Testing of material and filling:</u></b> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series.</p> <b><u>Precast concrete block road surfacing:</u></b> <p>Paving shall be laid in accordance with SABS 1200 MJ, SANS 1058 and the Concrete Masonry Association's specifications.</p> <p>Paving shall be laid to herringbone pattern on 25mm thick (thickness after final compaction) clean river sand (preparation of ground or filling elsewhere).</p>				
Carried to Collection			R	
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		Unit	Quantity	Rate	Amount
	Clean sand shall be swept into joints between roadstones at completion.				
	<b><u>ROADWORK, PARKING AREAS AND PAVING</u></b>				
	<b><u>Excavation in earth not exceeding 2m deep</u></b>				
1	Over site between buildings, retaining walls, etc. to reduce levels and dispose in prescribed stock piles on site	m <sup>3</sup>	1 566		
	<b><u>Extra over bulk excavation in earth for excavation in</u></b>				
2	Soft rock	m <sup>3</sup>	157		
3	Hard rock	m <sup>3</sup>	94		
	<b><u>Extra over all excavations for carting away</u></b>				
4	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m <sup>3</sup>	1 566		
	<b><u>Keeping excavations free of water</u></b>				
5	Keeping excavations free of water other than subterranean water	Item			
	<b><u>Earth filling supplied by the contractor under parking areas, roadways, etc.</u></b>				
6	150m Thick Sub-base course of G5 material in accordance with SABS 1200 DM, compacted to 93% Mod AASHTO density (Note: Quantity is measured in cubic metres)	m <sup>3</sup>	783		
7	150mm Thick Sub-base course of G5 material in accordance with SABS 1200 DM, compacted to 98% Mod AASHTO density (Note: Quantity is measured in cubic metres)	m <sup>3</sup>	783		
	<b><u>Compaction of surfaces</u></b>				
8	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	m <sup>2</sup>	5 219		
	<b><u>Additional tests required by the engineer</u></b>				
9	In-situ dry density test in accordance with method A10(b) of TMH1	No	52		
	<b><u>30MPa/19mm reinforced concrete</u></b>				
10	Paving to parking areas, roadways, etc. in panels between construction joints etc.	m <sup>3</sup>	799		
	Carried to Collection			R	
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	Roads And Parkings				

		Unit	Quantity	Rate	Amount
	<b><u>Finishing top surfaces of concrete with broom drag finish:</u></b>				
11	Paving to parking areas, roads, etc. to falls	m <sup>2</sup>	1 224		
	<b><u>Test cubes</u></b>				
12	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	80		
	<b><u>Smooth formwork to sides</u></b>				
13	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	826		
	<b><u>Saw-cut joints</u></b>				
14	6 x 30mm Saw-cut joints in top of concrete	m	1 200		
15	3 x 65mm Saw-cut joints with top reamed out to 6 x 30mm in top of concrete	m	1 200		
	<b><u>Expansion joints with 8mm softboard or closed cell expanded polyethylene with 8 x 35mm hinged blocking piece through concrete paving including one coat bitumen to one face</u></b>				
16	Paving not exceeding 300mm thick	m	1 800		
	<b><u>Form construction joint 200 mm high using a diamond dowel system comprising 115mm x 115mm x 5mm thick hot dipped galvanised plates at 450mm centres including one coat bitumen to one face and all necessary formwork, temporary pegs, stays, supports, etc.,</u></b>				
17	Paving not exceeding 300mm thick	m	480		
	<b><u>Fabric reinforcement</u></b>				
18	Ref 500 fabric reinforcement in concrete paving etc.	m <sup>2</sup>	3 995		
	<b><u>80mm Thick Type S-A approved precast concrete coloured interlocking paving blocks (colour to Architects later specification) in accordance with SANS 1058, laid to falls on and including 25mm thick sand layer with joints filled in with sand, compacted with a vibration compactor.</u></b>				
19	Paving to parking areas etc. to falls	m <sup>2</sup>	1 224		
20	Extra over for straight edge blocks	m	735		
	Carried to Collection			R	
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		Unit	Quantity	Rate	Amount
	<b><u>Precast concrete kerbing finished smooth on exposed surfaces, including bedding, jointing and pointing</u></b>				
21	150 x 300mm High kerbs (SANS 927 fig 3) with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint, including excavation, backfilling, etc.	m	528		
22	150 x 300mm High kerbs (SANS 927 fig 3) with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint, circular on plan exceeding 4m radius, formed with straight kerbs, including excavation, backfilling, etc.	m	61		
23	150 x 300mm High kerbs (SANS 927 fig 3) with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint, circular on plan not exceeding 4m radius, formed with short lengths of straight kerbs, including excavation, backfilling, etc.	m	45		
	<b><u>Polyurethane sealing compound including backing cord, bond breaker, primer, etc.</u></b>				
24	6 x 10mm In saw-cut joints	m	1 200		
	<b><u>Sikaflex Pro-3 or equally approved sealing compound including backing cord, bond breaker, Sika 3N or equally approved primer, etc.</u></b>				
25	8 x 10mm In expansion joints, including raking out expansion joint filler as necessary	m	1 800		
	<b><u>Road signs</u></b>				
26	Type R1 - Series 'R' 900mm stop sign constructed of 1.4mm thick sheet steel in sign faces with galvanised background and symbols, characters, legends and borders in engineering grade retro-reflective material complete with reinforcement fitted on and including 125-150 mm diameter bitumen impregnated creosote pole bedded in and including unreinforced concrete base, including any necessary excavation, paint finish, stainless steel strapping, etc.	No	2		
27	Ditto, but Type R3 - No Entry sign	No	1		
28	Ditto, but Type R313 - Goods Vehicle sign	No	2		
29	Ditto, but Type R323 - Disabled Persons Vehicle sign	No	2		
30	Ditto, but Type R2 - Yield sign	No	1		
31	Ditto, but Type R201 - Speed Limit sign	No	1		
	Carried to Collection				
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		Unit	Quantity	Rate	Amount
<b><u>PAINTWORK</u></b>					
<b><u>Prepare and apply one coat white reflective road marking paint on bituminous road surfacing, precast concrete paving blocks, concrete road surfacing, etc.</u></b>					
32	100mm Wide line	m	360		
33	300mm Wide line	m	20		
34	600mm Wide line	m	30		
35	Straight directional arrow 300 x 3500mm overall	No	25		
36	Right/Left turn directional arrow 300 x 3500mm overall	No	4		
37	Straight directional arrow 500 x 3500mm overall with right/left turn side arrow 955 x 600mm overall	No	6		
38	Painted "STOP" sign with 2000mm high letter	No	4		
39	Painted disabled parking bay sign 2000mm long.	No	2		
<b><u>GUARDRAILS, ETC.</u></b>					
<b><u>Guardrails, etc</u></b>					
40	Guardrail 900mm high overall consisting of 200mm diameter creosote treated timber posts spaced at 3810mm centres and fixed to concrete hard stands (elsewhere measured) by means of 219mm diameter x 10mm thick galvanised steel tube with M16 x 250mm Armco or equally approved through bolt, two (No.2) 10mm diameter weepholes and 359 x 359 x 10mm thick base plate bolted to existing concrete hardstands by means of four (No.4) M16 x 170mm diameter anchor bolts. Guardrail comprising W-shaped galvanised steel guardrail with pre-drilled bolt holes fixed to poles with and including 16mm diameter x 330mm long high yield Armco or equally approved stress bolt on and including 360 x 115 x 115mm CCA treated pine spacer block, complete including all necessary concrete core drilling etc. (all as per BVI Engineers drawing No. 33722-DET-10	m	243		
41	Extra over for bullnose (all as per BVI Engineers drawing No. 33722-DET-10)	No	4		
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		Unit	Quantity	Rate	Amount
42	Guardrail comprising W-shaped galvanised steel guardrail with pre-drilled bolt holes fixed to reinforced concrete retaining walls (elsewhere measured) with and including 16mm diameter x 220mm long chemical anchor bolts on and including 360 x 115 x 115mm CCA treated pine spacer block at 1905mm centres, installed complete (all as per BVI Engineers drawing No. 33722-DET-10)	m	170		
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**EXTERNAL WORKS**

**BILL NO. 7**

**ROADS AND PARKINGS**

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Roads And Parkings

	Unit	Quantity	Rate	Amount
<b><u>SECTION NO. 3</u></b> <b><u>EXTERNAL WORKS</u></b> <b><u>BILL NO. 8</u></b> <b><u>BUILDERS WORK FOR NOMINATED INSTALLATIONS</u></b>  <b><u>PREAMBLES</u></b> <p>The Tenderer is referred to the relevant Clause in the separate document Model Preambles for Trades (2008 Edition) as published by the Association of South African Quantity Surveyors and the Supplementary Preambles which are incorporated in these Bills of Quantities</p> <b><u>SUPPLEMENTARY PREAMBLES</u></b> <p>Items, materials or methods to be used specified by trade names or catalogue numbers are only an indication of the quality required. Items, materials or methods of similar quality may be used with prior approval from the Architect.</p> <b><u>NOTE:</u></b> <p>Where items in the Bill are identical to those in the previous Bills, the descriptions have been shortened and the Supplementary Preambles omitted, and therefore the full descriptions in the Trades concerned together with the relevant Supplementary Preambles are to be referred to for the full meaning and intent of each item.</p> <b><u>BUILDERS WORK IN CONNECTION WITH EXTERNAL ELECTRICAL AND MECHANICAL INSTALLATIONS</u></b> <p>The following in Builders Work in connection with Electrical &amp; Mechanical Installations:</p> <b><u>DUCTS FOR ELECTRICAL AND TELEPHONE CABLES, ETC.</u></b> <b><u>Kabelflex or equally approved sleeve pipes:</u></b>				
1				
Supply, lay, bed and prove 50mm diameter KABELFLEX sleeve pipes with and including 4,0mm draw-wire, laid in and including trenches exceeding 1m not exceeding 2m deep, including all excavations, bedding, backfilling with imported material, carting away surplus material, compacting to required density, fittings, etc., complete.	m	20		
Carried to Collection			R	
Section No. 3 Bill No. 8 Builders Work For Nominated Installations				

		Unit	Quantity	Rate	Amount
2	Supply, lay, bed and prove 75mm diameter KABELFLEX sleeve pipes with and including 4,0mm draw-wire, laid in and including trenches exceeding 1m not exceeding 2m deep, including all excavations, bedding, backfilling with imported material, carting away surplus material, compacting to required density, fittings, etc., complete.	m	50		
3	Supply, lay, bed and prove 110mm diameter KABELFLEX sleeve pipes with and including 4,0mm draw-wire, laid in and including trenches exceeding 1m not exceeding 2m deep, including all excavations, bedding, backfilling with imported material, carting away surplus material, compacting to required density, fittings, etc., complete.	m	180		
4	Supply, lay, bed and prove 160mm diameter KABELFLEX sleeve pipes with and including 4,0mm draw-wire, laid in and including trenches exceeding 1m not exceeding 2m deep, including all excavations, bedding, backfilling with suitable material, carting away surplus material, compacting to required density, fittings, etc., complete.	m	435		
5	Extra for 50mm 45° Long radius bend	No	5		
6	Extra for 50mm 90° Long radius bend	No	5		
7	Extra for 75mm 45° Long radius bend	No	13		
8	Extra for 75mm 90° Long radius bend	No	9		
9	Extra for 110mm 45° Long radius bend	No	25		
10	Extra for 110mm 90° Long radius bend	No	16		
11	Extra for 160mm 45° Long radius bend	No	45		
12	Extra for 160mm 90° Long radius bend	No	39		
13	Extra for cable sleeve seal	No	4		
<b><u>MANHOLES</u></b>					
<b><u>Manholes, etc.</u></b>					
14	Manhole, complete, size 1400 x 1400 x average 1000mm deep including 230mm brickwork, reinforced concrete slab cover and SABS 558 Type 1A double seal heavy duty cast iron manhole cover and frame in square base including excavations, backfilling, carting away surplus material, etc. (all as per BVI Engineers drawing No. 33722-DET-11)	No	2		
Carried to Collection				R	
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		Unit	Quantity	Rate	Amount
15	Manhole, complete, size 1800 x 1800 x average 1000mm deep including 230mm brickwork, reinforced concrete slab cover and SABS 558 Type 1A double seal heavy duty cast iron manhole cover and frame in square base including excavations, backfilling, carting away surplus material, etc. (all as per BVI Engineers drawing No. 33722-DET-11)	No	2		
	<b><u>Sundries:</u></b>				
16	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock	m <sup>3</sup>	17		
17	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in hard rock	m <sup>3</sup>	1		
18	Extra over excavation for pipe trenches, chambers, etc for carting away surplus material to a dumping site to be located by the Contractor	m <sup>3</sup>	51		
19	Extra over backfilling to drain trenches, chambers, etc for approved earth backfilling supplied by the Contractor	m <sup>3</sup>	51		
20	Unreinforced 15Mpa mass concrete encasing to horizontal pipe	m <sup>3</sup>	2		
21	Standard precast concrete cable route marker blocks in the shape of truncated pyramids approximately 300mm high, 150 x 150mm at the top and 250 x 250mm at the bottom set in ground and protruding 50mm above ground, to route of underground cable, with brass plates cast into top of blocks with the wording ' Electrical Cable' and directional arrows and the voltage rating, all as per specification under electrical specifications.	No	8		
22	Cable painted kerb marker	No	5		
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**BUILDERS WORK FOR NOMINATED INSTALLATIONS**

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Builders Work For Nominated Installations





## **SECTION NO. 4**

# **PROVISIONAL SUMS AND ALLOWANCES**

# **SECTION NO. 4**

## **PROVISIONAL SUMS AND ALLOWANCES**

### **PROVISIONAL SUMS**

The tenderer's attention is drawn to the fact that all Provisional Sums stated are nett and do not include builder's discount.

#### **Electrical Installation Including Bulk Supply**

1	Provide the sum of R18 900 000-00 (Eighteen million nine hundred thousand rand) for Electrical Installation Including Bulk Supply	Item	18 900 000	00
2	Allow for profit	Item		
3	Allow for attendance	Item		

#### **Air Conditioning And Ventilation Installation**

4	Provide the sum of R8 150 000-00 (Eight million one hundred and fifty thousand rand) for Air Conditioning And Ventilation Installation	Item	8 150 000	00
5	Allow for profit	Item		
6	Allow for attendance	Item		

#### **Early Warning Detection and Alarm Installation**

7	Provide the sum of R 705 000-00 (Seven hundred and five thousand rand) for Early Warning Detection and Alarm Installation	Item	705 000	00
8	Allow for profit	Item		
9	Allow for attendance	Item		

#### **Fire Protection Including Sprinkler Installation, Fire Hose Reels And Internal Hydrants**

10	Provide the sum of R7 800 000-00 (Seven million eight hundred thousand rand) for Fire Protection Including Sprinkler Installations, Fire Hose Reels And Internal Hydrants	Item	7 800 000	00
11	Allow for profit	Item		
12	Allow for attendance	Item		

#### **Hot Water Generation And Storage**

13	Provide the sum of R100 000-00 (Owo hundred thousand rand) for Hot Water Generation And Storage	Item	100 000	00
14	Allow for profit	Item		
15	Allow for attendance	Item		

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Bill No. 1

Provisional Sums

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		Amount	
<b><u>Cladding To Transformer, Mv and LV Room Including Framework</u></b>			
16	Provide the sum of R300 000-00 (Three hundred thousand rand) for Cladding To Transformer MV and LV Room Including Framework	Item	300 000 00
17	Allow for profit	Item	
18	Allow for attendance	Item	
<b><u>Joinery Installation</u></b>			
19	Provide the sum of R250 000-00 (Two hundred and fifty thousand rand) for Joinery Installation	Item	250 000 00
20	Allow for profit	Item	
21	Allow for attendance	Item	
<b><u>Dock Levellers And Seals</u></b>			
22	Provide the sum of R1 400 000-00 (One million four hundred thousand rand) for Dock Levellers And Seals	Item	1 400 000 00
23	Allow for profit	Item	
24	Allow for attendance	Item	
<b><u>Aluminium Windows, Louvres, Doors, Viewing Panels, Etc</u></b>			
25	Provide the sum of R1 400 000-00 (One million four hundred thousand rand) for Aluminium Windows, Louvres, Doors, Viewing Panels, Curtain Walls, Etc	Item	1 400 000 00
26	Allow for profit	Item	
27	Allow for attendance	Item	
<b><u>Structural Steelwork</u></b>			
28	Provide the sum of R12 700 000.00 (Twelve million seven hundred thousand rand) for Structural Steelwork	Item	12 700 000 00
29	Allow for profit	Item	
30	Allow for attendance	Item	
<b><u>Turnstyles</u></b>			
31	Provide the sum of R180 000-00 (One hundred and eighty thousand rand) for Turnstyles	Item	180 000 00
32	Allow for profit	Item	
33	Allow for attendance	Item	
Carried To Section Summary		R	
Section No. 4			
Bill No. 1			
Provisional Sums			

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		Amount	
<b><u>Statutory Signage</u></b>			
34	Provide the sum of R40 000-00 (Forty thousand rand) for Statutory Signage	Item	40 000 00
35	Allow for profit	Item	
36	Allow for attendance	Item	
<b><u>Operable Partition Door to Boardroom</u></b>			
37	Provide the sum of R50 000-00 (Fifty thousand Rand) for Operable Partition Door to Boardroom.	Item	50 000 00
38	Allow for profit	Item	
39	Allow for attendance	Item	
<b><u>Roller Shutter Doors</u></b>			
40	Provide the sum of R550 000-00 (Five hundred and fifty thousand rand) for Roller Shutter Doors	Item	550 000 00
41	Allow for profit	Item	
42	Allow for attendance	Item	
<b><u>Balustrading and Handrails</u></b>			
43	Provide the sum of R500 000-00 (Five hundred thousand rand) for Balustrading and Handrails	Item	500 000 00
44	Allow for profit	Item	
45	Allow for attendance	Item	
<b><u>Cat Ladders</u></b>			
46	Provide the sum of R35 000-00 (Thirty five thousand rand) for Cat Ladders	Item	35 000 00
47	Allow for profit	Item	
48	Allow for attendance	Item	
<b><u>Shade Louvres</u></b>			
49	Provide the sum of R600 000-00 (Six hundred thousand rand) for Shade Louvres	Item	600 000 00
50	Allow for profit	Item	
51	Allow for attendance	Item	
<b><u>Fencing And Gates</u></b>			
52	Provide the sum of R1 200 000-00 (One million two hundred thousand rand) for Fencing And Gates	Item	1 200 000 00
Carried To Section Summary		R	
Section No. 4			
Bill No. 1			
Provisional Sums			

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		Amount	
53	Allow for profit	Item	
54	Allow for attendance	Item	
<b><u>Bulk Water And Fire Main Connection</u></b>			
55	Provide the sum of R200 000-00 (Two hundred thousand rand) for Bulk Water And Fire Main Connection	Item	200 000 00
56	Allow for profit	Item	
57	Allow for attendance	Item	
<b><u>Fibreglass Gutters And Geberit Pluvia Rainwater System</u></b>			
58	Provide the sum of R5 500 000-00 (Five million five hundred thousand rand) for Fibreglass Gutters And Geberit Pluvia Rainwater System	Item	5 500 000 00
59	Allow for profit	Item	
60	Allow for attendance	Item	
<b><u>Landscaping</u></b>			
61	Provide the sum of R200 000-00 (Two hundred thousand rand) for Landscaping	Item	200 000 00
62	Allow for profit	Item	
63	Allow for attendance	Item	
<b><u>Clearing Site Of Bush, Trees, Etc., Prior To Bulk Earthworks</u></b>			
64	Provide the sum of R200 000-00 (Two hundred thousand rand) for Clearing Site Of Bush, Trees Etc., Prior To Bulk Earthworks	Item	200 000 00
65	Allow for profit	Item	
66	Allow for attendance	Item	
<b><u>Gridnic partitioning system</u></b>			
67	Provide the sum of R1 000 000-00 (One million rand) for Gridnic partitioning system	Item	1 000 000 00
68	Allow for profit	Item	
69	Allow for attendance	Item	
<b><u>Budgetary Allowances</u></b>			
<b><u>The following budgetary allowances are for work to be executed by the Contractor and paid for in terms of the Conditions of Contract ( work is to be remeasured at Bill rates where-ever possible ).</u></b>			
70	Provide the budgetary allowance of R560 000-00 (Five hundred and sixty thousand rand) for Substation	Item	560 000 00
Carried To Section Summary		R	
Section No. 4			
Bill No. 1			
Provisional Sums			

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		Amount	
71	Provide the budgetary allowance of R300 000-00 (Three hundred thousand rand) for underground gas tank, gas point and oil store.	Item	300 000 00
72	Provide the budgetary allowance of R850 000-00 (Eight hundred and fifty thousand rand) for Gate House	Item	850 000 00
73	Provide the budgetary allowance of R300 000-00 (Three hundred thousand rand) for Refuse Enclosure	Item	300 000 00
74	Provide the budgetary allowance of R250 000-00 (Two hundred and fifty thousand rand) for builders work for electrical	Item	250 000 00
75	Provide the budgetary allowance of R300 000-00 (Three hundred thousand rand) for galvanised framework to receive diagonal cladding	Item	300 000 00
76	Provide the budgetary allowance of R500 000-00 (Five hundred thousand rand) for Ironmongery	Item	500 000 00
77	Provide the budgetary allowance of R20 000-00 (Twenty thousand rand) for builders work for dock levellers	Item	20 000 00
78	Provide the budgetary allowance of R20 000-00 (Twenty thousand rand) for road crossing for water main	Item	20 000 00
79	Provide the budgetary allowance of R 4 000 000.00 (Four million rand) for escalation to be adjusted in accordance with the JBCC Contract Price Adjustment Provisions	Item	4 000 000 00
Carried To Section Summary		R	
Section No. 4			
Bill No. 1			
Provisional Sums			

**SECTION NO. 4**

**PROVISIONAL SUMS AND ALLOWANCES**

**SECTION SUMMARY**

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Brought forward from page	138

Carried to Final Summary

R

Section No. 4

SECTION SUMMARY



Section No.		Page		
	<b><u>FINAL SUMMARY</u></b>			
1	PRELIMINARIES	17		
2	BUILDING WORKS	82		
3	EXTERNAL WORKS	132		
4	PROVISIONAL SUMS AND ALLOWANCES	139		
	ADD: CONTINGENCY ALLOWANCE			
	Allow the Amount of R6 500 000.00 (Six Million Five Hundred Thousand Rands) for Contingencies, to be used by the Architect/Principal Agent and approved by the Client, in terms of the Principal Building Agreement.		6 500 000	00
	SubTotal excluding Value Added Tax			
	ADD VAT @ 15%:			
	Carried to Tender		R	
	FINAL SUMMARY			

## **C2.3 SCHEDULE FOR IMPORTED MATERIALS AND EQUIPMENT**

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Tenderer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_ Employer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_

Part C2.3: Schedule for Imported Materials and Equipment

## C2.3 DPW-23 (EC): Schedule for Imported Materials and Equipment

<b>Project title:</b>	PROVISION OF MANUFACTURING FACILITY IN ZONE 1A OF THE ELIDZ
<b>Tender no:</b>	EB/ASP2/07/18/Z1A

This schedule should be completed by the tenderer. (Attach additional pages if more space is required)

Item	Material / Equipment	Rand (R) (Excl. VAT)
1.		R
2.		R
3.		R
4.		R

The Contractor shall list imported items, materials and/or equipment which shall be excluded from the Contract Price Adjustment Provisions (if applicable) and shall be adjusted in terms of currency fluctuations only. Copies of the supplier's quotations for the items, materials or equipment (provided that such costs shall not be higher than the relevant contract rate as listed above) should be lodged with the Principal Agent / Engineer of the Department of Public Works within 60 (sixty) days from the date of acceptance of the tender. No adjustment of the local VAT amount, nor the contractor's profit, discount, mark-up, handling costs, etc. shall be allowed.

These net amounts will be adjusted as follows:

### FORMULA:

The net amount to be added to or deducted from the contract sum:  $A = V \times (\frac{Z}{Y} - 1)$

A = the amount (R) of adjustment

V = the net amount (supplier's quotation) (R) of the imported item

Y = exchange rate at the closing date of tender submission

Z = exchange rate on the date of payment.

<b>SIGNED FOR THE TENDERER:</b>		..... <b>NAME OF TENDERER</b>
..... <b>SIGNATURE: TENDERER</b>		..... <b>SIGNATURE: WITNESS 1</b>
NAME: .....		NAME: .....
CAPACITY: .....		..... <b>SIGNATURE: WITNESS 2</b>
DATE: .....		NAME: .....

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

## **C2.4: GUARANTOR PROFORMA LETTER OF INTENT**

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Tenderer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_ Employer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_

## C2.4: Guarantor Proforma Letter of Intent

### PROVISION OF MANUFACTURING FACILITY IN ZONE 1A OF THE ELIDZ AT THE EAST LONDON IDZ

#### TENDER No. EB/ASP2/07/18/Z1A

The following letter is to be reproduced on the Guarantor's company letterhead

EAST LONDON INDUSTRIAL DEVELOPMENT ZONE SOC LTD  
Lower Chester Road  
EAST LONDON  
5201

Date:

Attention: Mr G. Whittaker

Dear Sir,

#### ELIDZ: PROVISION OF MANUFACTURING FACILITY IN ZONE 1A OF THE ELIDZ - TENDER No. EB/ASP2/07/18/Z1A

I/we ..... the undersigned undertake to provide an unaltered JBCC Construction Guarantee on behalf of .....(the Contractor) for the amount of R ..... (in words) in favour of the East London Industrial Development Zone SOC Ltd should ..... (the Contractor) be awarded the ELIDZ: Provision of Manufacturing Facility IN ZONE 1A OF THE ELIDZ.

Yours faithfully,

.....  
Guarantor

## **C2.5: CONTRACT DATA CE**

**C2.5: Contract Data CE (Contractor)**

	<p>The Conditions of Contract are clauses 1 to 42 of the JBCC series 2000 Principal Building Agreement (Edition 5 of July 2007) prepared by the Joint Building Contracts Committee.</p> <p>Copies of these conditions of contract may be obtained from the Association of South African Quantity Surveyors, Master Builders Association, South African Association of Consulting Engineers, South African Institute of Architects, Association of Construction Project Managers, Building Industries Federation South Africa, South African Property Owners Association or Specialist Engineering Contractors Committee.</p>		
	<p><b>Definitions</b></p> <p>The definitions used in this document and the interpretation thereof are as listed in the Principal Building Agreement. The word or phrase of a definition is in bold text and shall bear the meaning assigned to it in the Principal Building Agreement. Where such word or phrase is not highlighted it shall bear the meaning consistent with the context of its use. The listed defined word or phrase does not qualify as a definition where information required to be stated in the contract data has not been provided.</p>		
	<p><b>Provision of Contract Data</b></p> <p>Spaces requiring information must be filled in, shown as “not applicable” or deleted but not left blank. Where choices are offered, the non-applicable items are to be deleted. Where insufficient space is provided the information should be annexed hereto and cross referenced to the applicable clause of the contract data.</p>		
	<p><b>Reference Clauses</b></p> <p>Where relevant the Principal Building Agreement clause applicable to the required information is printed in italics under the Contract Data clause number ie. <i>[27.4.2]</i></p>		
1.0	CONTRACTING PARTY		
1.1	Contractor:		
	Postal address:		
		Code	
	Tel :		Fax :
	Email :		
	Tax/VAT registration No :		
[1.2]	Physical address:		
	Tel :		Fax :
	Email:		
2.0	SECURITIES		
2.1	Security		
	The security provisions selected are:		
2.1.1 [14.3]	Variable Construction Guarantee	Yes/No	
2.1.2 [14.4]	Fixed Construction Guarantee and Payment Reduction	Yes/No	
2.1.3	Advanced Payment is required. Where	(Amount)	

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

[14.5]	"Yes"		
2.1.4	An Advance Payment Guarantee to be provided	Yes/No	
3.0	PAYMENT AND ADJUSTMENT OF PRELIMINARIES		
3.1	Payment of Preliminaries The payment of preliminaries shall be according to the option selected by the contractor. The amount included in each monthly payment certificate in respect of preliminaries as stated in the contract data shall be.		
3.1.1	Option A Assessed by the principal agent as an amount prorated to the value of the work duly executed in the same ratio as the preliminaries bears to the contract sum excluding: <ul style="list-style-type: none"> <li>• The amount for preliminaries</li> <li>• Any contingency sum</li> <li>• Any amount in respect of CPAP</li> <li>• All inclusive of tax</li> </ul>		
3.1.2	Option B Calculated from the priced items in the bills of quantities/lump sum document. The contractor and the principal agent shall agree on a division of the priced preliminaries items into: <ul style="list-style-type: none"> <li>• An initial or establishment charge</li> <li>• A monthly charge</li> <li>• A final or disestablishment charge</li> <li>• All inclusive of tax</li> </ul> In arriving at such a division cognizance shall be taken of such factors as: <ul style="list-style-type: none"> <li>• Premiums for annually renewable insurance policies</li> <li>• Plant, scaffolding and the like remaining the property of the contractor or the hiring company and the capital costs thereof not treated as part of the initial charge</li> <li>• Where the initial construction period is extended the monthly charge shall be recalculated on the same basis as was originally applied but taking into account the revised construction period and the amounts already paid to the contractor</li> <li>• Should the contractor and the principal agent be unable to agree such division then the principal agent shall make a division of the amount of the preliminaries to be incorporated in the valuations for each monthly payment certificate.</li> </ul>		
3.2	Adjustment of preliminaries The amount or items of preliminaries shall be adjusted to take account of the theoretical financial effect which changes in time and/or value have on preliminaries. Such an adjustment shall be based on the particulars provided by the contractor for this purpose in terms of Option A or B and shall preclude any further adjustment of preliminaries. Adjustment of preliminaries in terms of Option A or B shall apply notwithstanding the actual employment of resources by the contractor in the execution of the works. The adjustment of preliminaries shall be based on the option as selected in the contractor's tender. For the adjustment of preliminaries both the contract sum and the contract value shall exclude: <ul style="list-style-type: none"> <li>• The amount of the preliminaries</li> <li>• Any contingency sum</li> <li>• Any amount in respect of CPAP</li> <li>• Dayworks</li> <li>• All inclusive of tax</li> </ul>		
3.2.1	Option A		

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_



	<p>The amount of preliminaries shall be adjusted in the following categories:</p> <ul style="list-style-type: none"> <li>• An amount which shall not be varied</li> <li>• An amount which shall be varied in proportion to the contract value as compared with the contract sum</li> <li>• An amount which shall be varied in proportion to the construction period as compared to the initial construction period excluding revisions to the construction period for which the contractor is not entitled to adjustment of of the contract value in terms of the agreement.</li> <li>• The contractor shall, within fifteen (15) working days of taking possession of the site, give the principal agent a breakdown, sub-divided into the above categories, of the amount for preliminaries in tabulated form, all to the satisfaction of the principal agent.</li> </ul>		
	<p>Should the contractor fail to provide such information within the period stipulated then the amount for preliminaries shall be subdivided into the following proportions:</p> <ul style="list-style-type: none"> <li>• 10% (ten percent) which amount shall not be varied</li> <li>• 15% (fifteen percent) which amount shall be varied in proportion to the contract value as compared to the contract sum</li> <li>• 75% (seventy percent) which amount shall be varied in proportion to the construction period as compared with the initial construction period</li> </ul>		
	<p>For a lump sum document, should the contractor fail to identify the amount for preliminaries, then such an amount shall be deemed to be 7.5% (seven and a half percent) of the contract sum excluding:</p> <ul style="list-style-type: none"> <li>• Any contingency sum</li> <li>• Any amount in respect of CPAP</li> <li>• All inclusive of tax</li> </ul>		
	<p>Where sectional completion is required in terms of the agreement, the contractor shall provide the principal agent with the division of the above categorised amounts into sections. Should the contractor fail to provide such information within the period stipulated the categorised amounts shall be prorated to the value of each section</p>		
	<p>Option B</p>		
3.2.2	<p>The contractor shall, within fifteen (15) working days of taking possession of the site, give the principal agent with a detailed breakdown of the amount for preliminaries. This breakdown shall set out, among others, full particulars of administrative, supervisory and other personnel, plant, transport and other resources and charges included in the amount for preliminaries. The contractor shall show the periods to which the individual items relate with the charge rate for such items by means of a program all to the satisfaction of the principal agent.</p>		
	<p>Where sectional completion is required in terms of the agreement, the contractor shall provide the principal agent with details of the resources required for each section and those that are common to sections. Should the contractor fail to provide such information within the period stipulated, Option A shall apply.</p>		
3.2.3	<p>Payment certificate cash flow</p>		
	<p>The contractor shall provide all reasonable assistance to the principal agent in the preparation of cash flow projections of claims for payment certificates where required by the employer. The projections shall be based on the program and shall be updated as and when the program requires updating. The cooperation of the contractor in terms of this item shall not prejudice his right to receive payment in terms of the agreement</p>		
3.2.4	The contract value shall be adjusted according to CPAP [3.1] (Yes/No)		YES
3.2.5	Payment of preliminaries [3.1.1, 3.1.2]	(A or B)	
3.2.6	Adjustment of preliminaries [3.2.1, 3.2.2]	(A or B)	
4.0	EMPLOYER CHANGES TO JBCC STANDARD DOCUMENTS		

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

4.1	Changes (if any) in terms of the Contract Data - Employer are accepted (Yes/No)	
	<i>Where "No" an addendum referenced to this clause is to be attached</i>	
5.0	THE TENDER	
5.1	This tender is to be submitted to the Employer at the street address provided in the invitation to tender before the tender closing date and time stipulated therein	
5.2	By the submission of this tender to the employer the tenderer offers and agrees to contract for, execute and complete the works for the tender sum as stated below	
5.3	Tenders will be opened in public directly after the stated closing time. Only the total tender sum as stated in each tender will be announced (Not Applicable)	
5.4	The lowest or any tender will not necessarily be accepted	
5.5	This tender shall remain in full legal force for 120 (One Hundred and Twenty) calendar days. the tenderer accepts liability for damages as may be suffered by the Employer should the Tender validity period not be honoured.	
5.6	This tender takes into account all listed items [4.0] for the purpose of preparing and submitting this tender.	
5.7	The successful tenderer will be appointed in terms of the JBCC Principal Building Agreement.	

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

## **C2.6: FORM OF OFFER AND ACCEPTANCE**

**C2.6: Form of Offer and Acceptance**

<b>Project title:</b>	<b>PROVISION OF MANUFACTURING FACILITY IN ZONE 1A OF THE ELIDZ</b>
<b>Contract No:</b>	<b>EB/ASP2/07/18/Z1A</b>

**A. OFFER**

The Employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of: **PROVISION OF MANUFACTURING FACILITY IN ZONE 1A OF THE ELIDZ**

The Tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the Tenderer, deemed to be duly authorized, signing this part of this form of offer and acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

**THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS:**

Rand (in words):	
Rand in figures:	R

This offer may be accepted by the Employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the Tenderer before the end of the period of validity stated in the tender data, whereupon the Tenderer becomes the party named as the Contractor in the conditions of contract identified in the contract data.

**THIS OFFER IS MADE BY THE FOLLOWING LEGAL ENTITY:** (cross out block which is not applicable)

Company or Close Corporation:	OR	Natural Person or Partnership:
		Whose Identity Number(s) is/are:
		Whose Income Tax Reference Number is/are:

**AND WHO IS (if applicable):**

Trading under the name and style of:	
--------------------------------------	--

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

**AND WHO IS** (if applicable):

Represented herein, and who is duly authorised to do so, by:	<b>Note:</b> <b>A Resolution / Power of Attorney, signed by all the Directors / Members / Partners of the Legal Entity must accompany this Offer, authorising the Representative to make this offer.</b>
Mr/Mrs/Ms:	
In his/her capacity as:	

**SIGNED FOR THE TENDERER:**

Name of Representative	Signature	Date

**WITNESSED BY:**

Name of Witness	Signature	Date

**GUARANTEE OFFERED:**

The Tenderer offers to provide security as indicated below:

<b>i.</b>	<b>cash deposit</b> of 10% of the Contract Sum (Excl. VAT) paid within 21 days after my /our Bid has been formally accepted	Yes	No
<b>ii</b>	<b>bank guarantee</b> of 10% of the Contract sum (Excl. VAT) submitted within 1 days after my /our Bid has been formally accepted.	Yes	No
<b>iii</b>	<b>insurance guarantee</b> of 10% of the Contract sum (Excl. VAT) submitted within 21 days after my /our Bid has been formally accepted.	Yes	No

**NB. Guarantees submitted must be issued by either an insurance company duly registered in terms of the Short-Term Insurance Act, 1998 (Act 35 of 1998) or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the Form of Guarantee included in Part C2.4. No alterations or amendments of the wording of the pro-forma will be accepted.**

The Tenderer elects as its domicilium citandi et executandi in the Republic of South Africa, where any and all legal notices may be served, as (physical address):

Domicilium Citandi Et Executandi:

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

Other Contact Details of the Tenderer are:

Postal address:			
Code:		Tel:	
Cell:		Fax:	
Email:			

## B. ACCEPTANCE

By signing this part of this form of offer and acceptance, the Employer identified below accepts the Tenderer's offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the Tenderer's offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- 2.1 Agreement and contract data
- 2.2 Pricing data
- 2.3 Scope of work
- 2.4 Site information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts 2.1 to 2.4 above.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the tender schedules as well as any changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this agreement. No amendments to or deviations from said documents are valid unless contained in this schedule.

The Tenderer shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the Employer's agent (whose details are given in the contract data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect, if delivered by hand on the day of delivery, or if delivered by courier within two working days after submission by the Employer to the courier services for a door-to-door delivery to the Tenderer, provided that the Employer notifies the Tenderer of the tracking number within 24 hours of such submission. Unless the Tenderer (now Contractor) within seven working days of the date of such submission notifies the Employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

### FOR THE EMPLOYER:

Name of Signatory	Signature	Date

<b>Name of Organisation:</b>	East London Industrial Development Zone SOC Ltd
Address of Organisation	Lower Chester Road, Sunnyridge, East London, 5201

### WITNESSED BY:

Name of Witness	Signature	Date

Tenderer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_ Employer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_

**SCHEDULE OF DEVIATIONS:**

1. Subject:
Detail:

  

2. Subject:
Detail:

  

3. Subject:
Detail:

By the duly authorised representatives signing this agreement, the Employer and the Tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the tender schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this agreement.



## **C2.7: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS**

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Tenderer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_ Employer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_

Part C2.7: Declaration Certificate for Local Production and Content for Designated Sectors

## **C2.7: SBD 6.2 DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS**

This Standard Bidding Document (SBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2011, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

### **1. General Conditions**

- 1.1. Preferential Procurement Regulations, 2011 (Regulation 9) makes provision for the promotion of local production and content.
- 1.2. Regulation 9(1) prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, such bids must be advertised with the specific bidding condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3. Where necessary, for bids referred to in paragraph 1.2 above, a two-stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in paragraph 4.1 below.

**The SABS approved technical specification number SATS 1286:2011 is accessible on [http://www.thedti.gov.za/industrial\\_development/ip.jsp](http://www.thedti.gov.za/industrial_development/ip.jsp) at no cost.**

1.6. A bid may be disqualified if –

- (a) this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation; and
- (b) the bidder fails to declare that the Local Content Declaration Templates (Annex C, D and E) have been audited and certified as correct.

## 2. Definitions

- 2.1. **“bid”** includes written price quotations, advertised competitive bids or proposals;
- 2.2. **“bid price”** price offered by the bidder, excluding value added tax (VAT);
- 2.3. **“contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- 2.4. **“designated sector”** means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;
- 2.5. **“duly sign”** means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility(close corporation, partnership or individual).
- 2.6. **“imported content”** means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour or intellectual property costs), plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;
- 2.7. **“local content”** means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;
- 2.8. **“stipulated minimum threshold”** means that portion of local production and content as determined by the Department of Trade and Industry; and
- 2.9. **“sub-contract”** means the primary contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.

**3. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:**

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
National Treasury Designated Sectors Instruction No. 15 of 2016/2017 Stipulated Minimum Threshold of Conversion Processes for Local Production and Content for Steel Products in Components for Construction	100% as set out in Table 1A and 1B

4. Does any portion of the services, works or goods offered have any imported content?

(Tick applicable box)

YES		NO	
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Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_

- 4.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date of advertisement of the bid.

The relevant rates of exchange information is accessible on [www.reservebank.co.za](http://www.reservebank.co.za).

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Bidders must submit proof of the SARB rate (s) of exchange used.

5. Were the Local Content Declaration Templates (Annex C, D and E) audited and certified as correct?

(Tick applicable box)

YES		NO	
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- 5.1. If yes, provide the following particulars:

(a) Full name of auditor: .....

(b) Practice number: .....

(c) Telephone and cell number: .....

(d) Email address: .....

(Documentary proof regarding the declaration will, when required, be submitted to the satisfaction of the Accounting Officer / Accounting Authority)

6. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.

**LOCAL CONTENT DECLARATION**  
**(REFER TO ANNEX B OF SATS 1286:2011)**

**LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)**

**IN RESPECT OF BID NO. ....**

**ISSUED BY:** (Procurement Authority / Name of Institution):

.....  
**NB**

- 1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.
- 2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on <http://www.thdti.gov.za/industrialdevelopment/ip.jsp>. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, ..... (full names),

do hereby declare, in my capacity as .....

of .....(name of bidder entity),  
the following:

- (a) The facts contained herein are within my own personal knowledge.
- (b) I have satisfied myself that:
  - (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
  - (ii) the declaration templates have been audited and certified to be correct.
- (c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	
Local content %, as calculated in terms of SATS 1286:2011	

Tenderer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_ Employer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_

**If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above.**

**The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.**

(d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.

(e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 13 of the Preferential Procurement Regulations, 2011 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

**SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**WITNESS No. 1** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**WITNESS No. 2** \_\_\_\_\_

**DATE:** \_\_\_\_\_

## **C2.8: DECLARATION FOR 30% SMME SUB- CONTRACTING AND TARGETED PERCENTAGE PER CIDB GROUP**

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Tenderer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_ Employer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_

C2.8: Declaration for 30% SMME Subcontracting and Targeted Percentage per CIDB Group

## C2.8 DECLARATION FOR 30% SMME SUB-CONTRACTING AND TARGETED PERCENTAGE PER CIDB GROUP

### TARGETED PERCENTAGES PER CIDB GROUP

CIDB Grading irrespective of trade	Max CIDB Value Range	Minimum Targeted Percentage Allocation Appportioned to the 30%	Percentage Goal Tendered	Estimated Rand Value (R) Including VAT
Grade 1-2	R 650 000	1%	%	R
Grade 3	R 2 000 000	1%	%	R
Grade 4	R 4 000 000	3%	%	R
Grade 5	R 6 500 000	5%	%	R
Grade 6	R 13 000 000	6%	%	R
Grade 7	R 40 000 000	14%	%	R
<b>Total % SMME Goal Tendered <sup>(1)</sup></b>		<b>30%</b>	<b>%</b>	<b>R</b>

**Note (1):** \*Bidders that do not meet minimum SMME 30% subcontracting requirements will be deemed to be non-responsive and shall be disqualified.

Tenderer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_ Employer \_\_\_\_\_ Witness 1 \_\_\_\_\_ Witness 2 \_\_\_\_\_



**CONTRACTOR DECLARATION WITH REGARDS TO 30% SMME SUB-CONTRACTING:**

I / We tender the following SMME participation targets of:

Tender Amount Including VAT	<b>R</b>
SMME Value Including VAT	<b>R</b>
Percentage of SMME to Tender Amount <sup>(1)</sup>	<b>%</b>

**Note (1):** *\*Bidders that do not meet minimum SMME 30% subcontracting requirements will be deemed to be non-responsive and shall be disqualified.*

<b>SIGNED FOR THE TENDERER:</b>	..... <b>NAME OF TENDERER</b>
..... <b>SIGNATURE: TENDERER</b>  NAME: .....  CAPACITY: .....  DATE: .....	..... <b>SIGNATURE: WITNESS 1</b>
	NAME: .....
	..... <b>SIGNATURE: WITNESS 2</b>
	NAME: .....

Tenderer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_ Employer \_\_\_\_ Witness 1 \_\_\_\_ Witness 2 \_\_\_\_