



Tender

DATA CENTRE FACILITY (MEET-ME-ROOM) IN ZONE 1A OF THE ELIDZ

AT THE

EAST LONDON INDUSTRIAL DEVELOPMENT ZONE

CONTRACT NO: ES/MEET/07/20/Z1A

**DATA CENTRE FACILITY (MEET-ME-ROOM) IN
ZONE 1A OF THE ELIDZ**

ENVELOPE B: FINANCIAL PROPOSAL

East London IDZ
Lower Chester Road
Sunnyridge, East London

Contact person: Ms. Anathi Mzantsi
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Latitude Quantity Surveyors
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Vincent, East London

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Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

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PART C1: AGREEMENTS AND CONTRACT DATA

Tenderer ____ Witness 1 ____ Witness 2 ____ Employer ____ Witness 1 ____ Witness 2 ____

Part C1: Agreement and Contract Data

C1.1 CONTRACT DATA EC

Tenderer ____ Witness 1 ____ Witness 2 ____ Employer ____ Witness 1 ____ Witness 2 ____

C1.1: CONTRACT DATA – EMPLOYER

	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. 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.
	Definitions 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.
	Provision of Contract Data 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. Reference Clauses 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]
1.0	CONTRACTING AND OTHER PARTIES
1.1	Employer:
[1.2]	East London Industrial Development Zone SOC Ltd
	Postal address:
	P O BOX 5458 Greenfields East London Tel: (043) 702 8200 Fax: (043) 7028251 Email: anathi@elidz.co.za Tax/VAT registration No. 4900 213 598
	Physical address:
	Lower Chester Road Sunnyridge East London Code 5201
1.2	Principal Agent
[5.1]	MDA Architects
	Physical address:
	17 Bonza Bay Road, Beacon Bay, East London Code 5241 Tel: 043 748 1391 Fax: (043) 748 1391 Email: pat@mdaarch.co.za
1.3	Agent (1)
[5.2]	Lukhozi Consulting Engineers
	Agent's service:
	PROJECT MANAGERS
	Physical address:

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	<p>Quartzite Drive Selborne, East London Code 5201 Tel: 043 721 1321 Fax: 086 663 7202 Email: c.brink@lukhozi.co.za</p>
1.4 [5.2]	<p>Agent (2) MDA Architects Agent's services: ARCHITECTS Physical address: 17 Bonza Bay Road, Beacon Bay, East London Code 5241 Tel: 043 748 1391 Fax: (043) 748 1391 Email: pat@mdaarch.co.za</p>
1.5 [5.2]	<p>Agent (3) Latitude Quantity Surveyors Agent's service: QUANTITY SURVEYOR Physical address: Office 2A, 123 Western Avenue, Vincent, East London Code 5201 Tel: 043 742 2884 Fax: 086 685 6559 Email: pwebber@latitudeqs.co.za</p>
1.7 [5.2]	<p>Agent (4) ZNM Consulting Engineers Agent's service: CIVIL 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</p>
1.8 [5.2]	<p>Agent (5) HHO Consulting Engineers Agent's service: STRUCTURAL ENGINEERS Physical address: Office No. 2, Ground Floor, Infinity Place 14 St. Helena Road, Beacon Bay, East London Code 5241 Tel: 043 727 0922 Fax: 043 727 0922 Email: randall@hho.co.za</p>
1.9 [5.2]	<p>Agent (6) Kuyaduduma Consulting Engineers Agent's service: ELECTRICAL ENGINEERS Physical address:</p>

Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

	30 East Band Road, East London Code 5201 Tel: 043 748 5711 Fax: 043 748 5711 Email: dean@kceng.co.za
1.10 [5.2]	Agent (7) Kuyaduduma Consulting Engineers Agent's service: MECHANICAL ENGINEERS Physical address: 30 East Band Road, East London Code 5201 Tel: 043 748 5711 Fax: 043 748 5711 Email: dean@kceng.co.za
1.11 [5.2]	Agent (8) To be appointed Agent's service: SHEQ Consultant Physical address: Code Tel: Fax: Email:
1.12 [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 2.1 [1.7]	CONTRACT AND SITE INFORMATION The law applicable to this agreement shall be that of the Republic of South Africa
2.2 [1.1]	Works identification: The construction of new Data Centre facility in Zone 1A of the ELIDZ
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: 29 April 2021
2.5 [15.3]	Period for the commencement of the works after the contractor takes possession of the site: (working days) 1

Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

2.6 [15.4]	Completion of the works in sections is required			No
[28.0]	Number of sections			0
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.			Yes
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, landslip 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
[12.6]	All other cases for the Sum of		(amount)	R20,000,000
	The contractor is responsible, in the case of Damage to Underground Services, for the deductible of		(amount)	R 25,000

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	The contractor is responsible, in the case of Third Party Damage, for the deductible of			(amount)	R 15,000
3.4	Support insurance to be effected by the				Employer
[11.1.1]	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			15 Dec 21	R20,000
4.2	For the works in sections			Date	Penalty Amount
[24.3.1] [28.1]	The date for practical completion and the penalty per calendar day		Section 1	NA	NA
			Section 2	NA	NA
			Section 3	NA	NA
5.0	DOCUMENTS AND GENERAL				
5.1	No of Construction documents to be supplied to the contractor				3
[3.7]					
5.2	The priced document may be used as a specification of materials and goods and work methods				No
[3.9]					
5.3	The contractor shall provide a schedule of rates				No
[3.10]					
5.4	Changes made to JBCC standard documents				Yes
[3.11]				(Addendum No)	NA
5.5	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
[3.11]					
5.6	Work to be undertaken by direct contractors			N/A	
[22.2]				Not Applicable	
5.7	On achievement of practical completion the contractor is to hand over manuals etc. related to the works as listed below:				
[24.9]	(1)	Electrical Installation	(2)		
	(3)	Fire Detection Installation	(4)	Air Conditioning Equipment Installation	
5.8	Interim payment certificate to be issued by			(Date of Month)	25 th day of the month
6.0	CHANGES MADE TO THE STANDARD JBCC DOCUMENT				
	Note: All changes in detail must be listed below or provided in			(Addendum No)	NA

Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

1.1	<p>The definition of “BILLS OF QUANTITIES” is amended by replacing it with the following:</p> <p>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.</p>
1.1	<p>The definition of “CONSTRUCTION PERIOD” is amended by replacing it with the following:</p> <p>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.</p>
1.1	<p>The definition of “WORKING DAYS” is amended by replacing it with the following:</p> <p>WORKING DAYS: Twenty-four (24) hour days commencing at midnight (00:00) which excludes Sundays and statutory holidays.</p>
3.1	<p>Clause 3.1 shall be amended as follows:</p> <p>Replace clause 3.1 with No clause</p>
3.3	<p>Delete the following in the third line of clause 3.3</p> <p>“of having received a payment guarantee from the employer [3.1]”</p>
7.2	<p>Add the following clause after clause 7.1:</p> <p>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.</p>
7.3	<p>Add the following clause after clause 7.2:</p> <p>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.</p>

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 five (5) working days after the acceptance of the tender</p> <ul style="list-style-type: none"> • OHS Plan/File • Construction Guarantee • Construction Programme
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) and the Contractors Site Area depicted on Drawing No DC-WD-AR-1205 Rev 01 Site Camp Location attached to these Bills of Quantities, which must be suitably fenced with 1,8m high 'Bonnox' fencing covered with shade cloth to the satisfaction of the Principal Agent. The contractor shall be responsible for keeping such areas in a clean, sanitary and orderly condition.</p>

Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

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 twenty (20) 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. The access area around the offices and the toilets shall be surfaced with clean crushed stone, which shall be well drained, kept free from mud and maintained throughout the contract period. The office accommodation shall be located within Contractors Site Area depicted on Drawing No DC-WD-AR-1205 Rev 01 Site Camp Location attached to these Bills of Quantities</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 m2 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 m2. 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. 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. 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. The office for the Clerk of works and Resident Engineers shall be located within Contractors Site Area depicted on Drawing No DC-WD-AR-1205 Rev 01 Site Camp Location attached to these Bills of Quantities</p>
19.1.4	<p>Add the following new clause after Clause 19.1.3:</p> <p>The Contractor must provide a temporary access road to the Contractors Site Camp as depicted on Drawing No "DC-WD-AR-1205 Rev 01 Site Camp Location" attached to these Bills of Quantities which must be made up of adequate layer works to accommodate the Contractors and the Tenants site traffic for the duration of the the contract. The temporary access road is to be maintained by the Contractor for the duration of the contract and the Contractor must re-instate/ rehabilitate contractors site and the access road from in accordance with 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 which sets out the Employers re-instatement requirements.</p>
19.1.5	<p>Add the following new clause after Clause 19.1.4:</p> <p>The Contractor must provide a sewer and a metered water and electrical connection to the Tenants site camp/ laydown area.</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>

Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

29.2.1	Clause 29.2.1 shall be amended as follows:	
	Replace clause 29.2.1 with No clause	
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 2021</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>	
	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.	
7.0	DECLARATION BY THE PRINCIPAL AGENT	
	I, the principal agent named in 1.2 above, declare that the information provided above is provisional 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

Tenderer ____ Witness 1 ____ Witness 2 ____ Employer ____ Witness 1 ____ Witness 2 ____

PART C2: PRICING DATA

C2.1 PRICING INSTRUCTIONS

Tenderer ____ Witness 1 ____ Witness 2 ____ Employer ____ Witness 1 ____ Witness 2 ____

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 or 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.

Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

C2.2 PROVISIONAL BILLS OF QUANTITIES

(TO BE COMPLETED IN BLACK INK AND RETURNED)

Tenderer ____ Witness 1 ____ Witness 2 ____ Employer ____ Witness 1 ____ Witness 2 ____

Part C2.2: Provisional Bills of Quantities

PROVISIONAL BILLS OF QUANTITIES
FOR
DATA CENTRE FACILITY (MEET-ME-ROOM)
FOR
EAST LONDON INDUSTRIAL DEVELOPMENT ZONE

ARCHITECTS

MDA Architects
17 Bonza Bay Road
Beacon Bay
East London
5241
Tel. +27 43 748 1391
Fax: +27 43 748 1391
e Mail: pat@mdaarchitects.co.za

Principal Agent

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Tel. +27 43 748 1391
Fax: +27 43 748 1391
e Mail: pat@mdaarchitects.co.za

Electrical Engineers

Kuyaduduma Consulting Engineers
Tel. +27 43 748 5711
Fax: +27 43 748 5711
e Mail: dean@kceeng.co.za

Project Managers

Lukhozi Project Managers
Tel. +27 43 721 1321
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e Mail: c.brink@lukhozi.co.za

QUANTITY SURVEYORS

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Quantity Surveyors
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Fax: (086) 6856 559
e Mail: admin@latitudeqs.co.za

Structural Engineers

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Fax: +27 43 727 0921
e Mail: randall@hho.co.za

Mechanical Engineers

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Tel. +27 43 748 5711
Fax: +27 43 748 5711
e Mail: dean@kceeng.co.za

Civil Engineers

ZNM Consulting
Tel. +27 87 350 4065
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e Mail: mzukisi@znmeng.co.za

SECTION NO. 1
PRELIMINARIES

SECTION NO. 1
PRELIMINARIES

BUILDING AGREEMENT AND PRELIMINARIES

Notes

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 **ASQAQS 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

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

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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

The definition of "**Bills of Quantities**" is amended by replacing it with the following:

"**Bills of Quantities**" is the document drawn up in accordance with the Standard System of Measuring Work 1999 sixth Edition (Revised). The contractor shall have priced the document to reflect the contract sum

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

The definition of "**Working Days**" is amended by replacing it with the following:

"**Working Days**": Twenty Four (24) hour days commencing at midnight (00:00) which excludes Sundays and statutory holidays

F: V: T:

Objective and preparations

2 Clause 2.0 - Offer acceptance and performance obligations

F: V: T:

3 Clause 3.0 - Documents

Clause 3.1 shall be amended as follows:

Replace clause 3.1 with No Clause

Delete the following in the third line of clause 3.3:

"of having received a payment guarantee from the employer [3.1]"

F: V: T:

4 Clause 4.0 - Design responsibility

F: V: T:

5 Clause 5.0 - Employer's agents

F: V: T:

6 Clause 6.0 - Contractor's site representative

F: V: T:

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7	<p>Clause 7.0 - Compliance with laws and regulations</p> <p>Add the following clause after clause 7.1:</p> <p>Clause 7.2 - Health and safety and COVID-19: 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 and COVID 19 specification (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 and COVID 19 specification, excluding the items priced and included in Section 4 Occupational Health and Covid 19 of these Bills of Quantities</p> <p>Add the following clause after clause 7.2:</p> <p>Clause 7.3 Construction Environmental Management Plan (C4):</p> <p>The Construction Environmental Management Plan (CEMP) REV 8 January 2016, incorporates specifications derived from recommendations in the Strategic Environmental Assessment (SEA), EIDZ 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: Volumen 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 copliance with the same</p> <p>F: V: T:</p>	Item
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>	
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	<p>Add the following to 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 day 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>Clause 5.3 The guarantor has failed to extend the guarantee when requested to do so by the Employer if the certificate of final completion 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> <p>F: V: T:</p> <p><u>Execution</u></p>	
15	<p>Clause 15.0 - Preparation for and execution of the works.</p> <p>Documents to be provided five (5) working days after the acceptance of the tender:</p> <p>1. OHS Plan / File</p> <p>2. Construction Guarantee</p> <p>3. Construction Programme</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>Add the following clause after clause 18.4</p> <p>Clause 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> <p>F: V: T:</p>	Item
19	<p>Clause 19.0 - Temporary works and plant</p> <p>Amend clause 19.1 as follows:</p> <p>Delete "Where required in the priced document"</p> <p>Substitute clause 19.1.1 with the following:</p>	
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	<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 further more be made for periodic adjustment of any enclosure or protection and for their eventual removal</p> <p>F: V: T:</p>	Item
20	<p>Hoardings and temporary fencings prescribed by the Employer 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>F: V: T:</p>	Item
21	<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) and the Contractors Site Area depicted on Drawing No DC-WD-AR-1205 Rev 01 Site Camp Location attached to these Bills of Quantities, which must be suitably fenced with 1,8m high 'Bonnox' fencing covered with shade cloth to the satisfaction of the principal agent. The contractor shall be responsible for keeping such areas in a clean, sanitary and orderly condition</p> <p>F: V: T:</p>	Item
22	<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 twenty (20) 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. The access area around the offices and the toilets shall be surfaced with clean crushed stone, which shall be well drained, kept free from mud and maintained throughout the contract period. The office accommodation shall be located within Contractors Site Area depicted on Drawing No 0046 ARCH DESIGN 205 Rev 0 Site Camp Locations attached to these Bills of Quantities</p> <p>F: V: T:</p>	Item
23	<p>Add the following clause after clause 19.1.2</p>	
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	<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 m2 and a ceiling height of atleast 2.5m, shall be waterproof, shall have 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 fan 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 7m2. 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 from mud and maintained throughout the contract period. 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. The office of the Clerk of Works and Resident Engineer shall be located within the Contractors Site Area on Drawing DC-WD-AR-1205 Rev 01 Site Camp Location attached to these Bills of Quantities</p>	
	F: V: T:	
24	<p>Add the following new clause after Clause 19.1.3:</p> <p>The Contractor must provide a temporary access road to the contractors Site Camp as depicted on Drawing No DC-WD-AR-1205 Rev 1 Site Camp Location attached to these Bills of Quantities which must be made up of adequate layer works to accommodate the Contractors and the Tenenats site traffic for the duration of the contract.</p> <p>The temporary access road is to be maintained by the Contractor for the duration of the contract and the Contractor must re-instate/rehabilitate contractors site and the access road from in accordance with 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 which sets out the Employers re-instatement requirements</p>	Item
	F: V: T:	
25	<p>Add the following clause after Clause 19.1.4:</p> <p>The contractor must provide a sewer and a metered water and electrical connection to the Tenants site camp/laydown area</p>	Item
	F: V: T:	
26	<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>	Item
	F: V: T:	
27	<p>Add the following to the end of clause 19.3:</p>	
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	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	Item
28	F: V: T: Clause 20.0 - Nominated subcontractors	
	Refer to the provisions on general attendance hereinafter	Item
29	F: V: T: Clause 21.0 - Selected subcontractors	
	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	Item
30	F: V: T: Clause 22.0 - Employer's direct contractors	Item
31	F: V: T: Clause 23.0 - Contractor's domestic subcontractors	Item
	F: V: T: <u>Completion</u>	
32	Clause 24.0 - Practical completion	
	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	Item
33	F: V: T: Clause 25.0 - Works completion	Item
34	F: V: T: Clause 26.0 - Final completion	Item
35	F: V: T: Clause 27.0 - Latent defects liability period	Item
36	F: V: T: Clause 28.0 - Sectional completion	Item
37	F: V: T: 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)	
	Clause 29.2.1 shall be amended as follows:	
	Relace clause 29.2.1 with No Clause	Item
	F: V: T:	
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38	<p>Clause 30.0 - Penalty for late or non-completion</p> <p>F: V: T:</p> <p>Payment</p>		
39	<p>Clause 31.0 - Interim Payment</p> <p>Amend clause 31.9 as follows:</p> <p>Amend by substituting seven (7) calender days with thirty (30) calender days</p> <p>Clause 31.5.3: The Contract is to be adjusted using CPAP indices. (clause 32.13) [31.5.3] Base month is FEBRUARY 2021</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 Statistics South Africa, dated January 2013 and any amendments thereto:</p> <p>1) Glass etc. measured in specialist section Metalwork, will be adjusted in terms of the index for that wok group unless specifically stated otherwise in the Provisional Bills of Quantities</p> <p>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 setsand intercommunication systems shall be in accordance with Work Group 170</p> <p>3) With reference to Work Group 190 a portion of the value related pre;iminaries pro rata to the amount of work excluded from adjustment, shall be excluded from Contract Price Adjustment Provisions, if Option A has been selectedfor the further adjustment of preliminaries</p> <p>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</p> <p>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</p> <p>Clause 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</p> <p>F: V: T:</p>	Item	
40	<p>Clause 32.0 - Adjustment to the contract value</p> <p>Where prices are submitted by the contractor or n/s subcontractor during the progress of the works in respect of contract instructions or in regard to a claim under the terms of the contract and notwithstanding the fact that such prices may be used in an interim payment certificate, there is to be no presumption of acceptance. Should the principal agent wish to accept any such prices prior to the issue of the final payment certificate, it shall be in writing</p> <p>F: V: T:</p>	Item	
41	<p>Clause 33.0 - Recovery of expense and loss</p> <p>F: V: T:</p>	Item	
42	<p>Clause 34.0 - Final account and final payment</p>		
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	Amend by substituting seven (7) calender days with thirty (30) calender days	Item	
	F: V: T:		
43	Clause 35.0 - Payment to other parties	Item	
	F: V: T:		
	<u>Cancellation</u>		
44	Clause 36.0 - Termination by employer - contractor's default	Item	
	F: V: T:		
45	Clause 37.0 - Termination by employer - loss and damage	Item	
	F: V: T:		
46	Clause 38.0 - Termination by contractor - employer's default	Item	
	F: V: T:		
47	Clause 39.0 - Termination - cessation of the works	Item	
	F: V: T:		
	<u>Dispute</u>		
48	Clause 40.0 - Settlement of disputes	Item	
	F: V: T:		
	<u>Contract Agreement</u>		
49	Clause 41.0 - Post tender provisions		
	The required post tender information shall be inserted in the post tender provisions after consultation with the contractor	Item	
	F: V: T:		
50	Clause 42.0 - Contractual agreement	Item	
	F: V: T:		
	<u>SECTION B: PRELIMINARIES</u>		
	<u>Definitions and Interpretation</u>		
51	Clause 1.0 - Definitions and interpretation	Item	
	F: V: T:		
	<u>Documents</u>		
52	Clause 2.1 - Checking of documents	Item	
	F: V: T:		
53	Clause 2.2 - Provisional bills of quantities	Item	
	F: V: T:		
54	Clause 2.3 - Availability of construction information	Item	
	F: V: T:		
	<u>Previous work and adjoining properties</u>		
55	Clause 3.1 - Previous work - dimensional accuracy	Item	
	F: V: T:		
56	Clause 3.2 - Previous work - defects	Item	
	F: V: T:		
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57	Clause 3.3 - Inspection of adjoining properties F: V: T: <u>Samples, shop drawings and manufacturer's instructions</u>	Item	
58	Clause 4.1 - Samples of materials F: V: T:	Item	
59	Clause 4.2 - Workmanship samples F: V: T:	Item	
60	Clause 4.3 - Shop drawings F: V: T:	Item	
61	Clause 4.4 - Compliance with manufacturer's instructions F: V: T: <u>Deposits and fees</u>	Item	
62	Clause 5.1 - Deposits and fees F: V: T: <u>Temporary services</u>	Item	
63	Clause 6.1 - Water F: V: T:	Item	
64	Clause 6.2 - Electricity F: V: T:	Item	
65	Clause 6.3 - Telecommunication facilities F: V: T:	Item	
66	Clause 6.4 - Ablution facilities F: V: T:	Item	
	<u>Prime cost amounts</u>		
67	Clause 7.1 - Responsibility for prime cost amounts F: V: T: <u>Special attendance on n/s subcontractors</u>	Item	
68	Clause 8.1 - Special attendance F: V: T: <u>General</u>	Item	
69	Clause 9.1 - Protection of the works F: V: T:	Item	
70	Clause 9.2 - Protection/isolation of existing/sectionally occupied works F: V: T:	Item	
71	Clause 9.3 - Security of the works F: V: T:	Item	
72	Clause 9.4 - Notice before covering work F: V: T:	Item	
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73	Clause 9.5 - Disturbance F: V: T:	Item	
74	Clause 9.6 - Environmental disturbance F: V: T:	Item	
75	Clause 9.7 - Works cleaning and clearing F: V: T:	Item	
76	Clause 9.8 - Vermin F: V: T:	Item	
77	Clause 9.9 - Overhand work F: V: T:	Item	
	<u>Schedule of Variables</u> 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		
78	10.1 - Provisional Bills of Quantities [clause 2.2] The quantities are provisional - Yes 10.2 - Availability of construction documentation [clause 2.3] Construction documentation is complete - No 10.3 - Previous work - dimensional accuracy [clause 3.1] - No 10.4 - Previous work - defects [clause 3.2] - No 10.5 - Inspection of adjoining properties [clause 3.3] - Yes 10.6 - Water [clause 7.2] Option A (by contractor) - No Option B (by employer - free of charge) - No Option C (by employer - metered) - Yes 10.7 - Electricity [clause 7.3] Option A (by contractor) - No Option B (by employer - free of charge) - No Option C (by employer - metered) - Yes 10.8 - Telecommunications (clause 7.4) Telephone - Yes Facsimile - Yes E-Mail - Yes 10.9 - Ablution facilities [clause 7.5] Option A (by contractor) - Yes Option B (by employer) - No		
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10.10 - Protection of the works [clause 9.1] - No		
10.11 - Protection/isolation of existing/sectionally occupied works [clause 9.2] Protection/isolation is required - Yes		
10.13 - Environmental disturbance [clause 9.6] - Yes	Item	
F: V: T:		
<u>SECTION C: SPECIFIC PRELIMINARIES</u>		
<u>C1. Site instructions</u>		
79 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:		
<u>C2. Overtime</u>		
80 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:		
<u>C3. Dayworks</u>		
81 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		
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82	<p>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</p> <p>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</p> <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><u>C4. Warranties for materials and workmanship</u></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
	<p><u>C5. Co-operation of the contractor for cost management</u></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
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<u>C6. Overloading</u>		
84	The contractor shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the works or temporary works eg scaffolding, etc. The contractor shall submit details of his proposed loading, storage, plant erection, etc to the principal agent for approval prior to proceeding with such loading, storing or erecting and shall comply with and pay for the principal agent's requirements in connection with the provision of temporary support work, etc. Any damage caused to the works by overloading shall be made good by the contractor at his sole expense F: V: T:	Item
<u>C7. Propping of floors below</u>		
85	The contractor is advised that propping of floors below may be required if he wishes to use any areas of completed suspended reinforced concrete slabs for vehicle access, storage of materials and goods and location of plant, scaffolding, etc. The location of these areas and any necessary propping shall be approved by the principal agent and the cost thereof shall be borne by the contractor F: V: T:	Item
<u>C8. Testing of windows for watertightness</u>		
86	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 F: V: T:	Item
<u>C9. Testing of flat roof waterproofing for watertightness</u>		
87	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 F: V: T:	Item
<u>C10. Ingress of water</u>		
88	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 F: V: T:	Item
<u>C11. Proprietary branded products</u>		
89	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 F: V: T:	Item
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<u>C12. As built drawings</u>		
90	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 F: V: T:	Item
<u>C13. Removal and making good of temporary works, etc, on completion</u>		
91	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 F: V: T:	Item
<u>C14. Making good</u>		
92	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 '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 '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 F: V: T:	Item
<u>C15. Shop drawings</u>		
93	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 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: 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 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	
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		Amount
<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> <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>		
C16. Scaffolding		
94	<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
C17. Media releases		
95	<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>	Item
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		Amount
	<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> <p><u>C18. HIV/AIDS awareness</u></p>	Item
96	<p>It is required of the Contractor to thoroughly study the HIV/AIDS Specification that must be read together with and is deemed to be incorporated under this Section of the Bills of Quantities / Lump Sum Document . Provision for pricing of HIV/AIDS awareness is made under items C17.1 to C17.5 hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained. The Contractor must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the Principal Agent, notwithstanding the provisions of Clause A 31.0 or any other clause to the contrary, reserves the right to delay issuing any progress payment certificate until the Contractor provides satisfactory proof of compliance. The Contractor shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment</p> <p>F: V: T:</p> <p><u>C18.1 Awareness champion</u></p>	Item
97	<p>Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification</p> <p>F: V: T:</p> <p><u>C18.2 Awareness workshops</u></p>	Item
98	<p>Selection and appointment of a competent Service Provider approved by the Principal Agent, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-media techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification</p> <p>F: V: T:</p> <p><u>C18.3 Posters, booklets, videos etc.</u></p>	Item
99	<p>Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the construction period, all in accordance with the HIV/AIDS Specification</p> <p>F: V: T:</p> <p><u>C18.4 Access to condoms</u></p>	Item
100	<p>Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period, all in accordance with the HIV/AIDS Specification</p> <p>F: V: T:</p>	Item
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		Amount
<u>C18.5 Monitoring</u>		
101	Monitoring HIV/AIDS awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/ AIDS Specification F: V: T:	Item
<u>C19. SMME'S</u>		
102	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 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 F: V: T:	Item
<u>C20. Employment of interns</u>		
103	The Contractor shall for the duration of the contract (9 months) employ two interns. The interns must have completed a three year qualification in the Built Environment, must be currently unemployed and not have had an internship opportunity before. The interns must be paid a stipend of R 150 000.00 per annum. F: V: T:	Item
<u>COMPULSORY BREAKDOWN FOR THE ADJUSTMENT OF PRELIMINARIES</u>		
<u>Compulsory breakdown for the adjustment of preliminaries</u>		
Value related (R_____)		
Fixed related (R_____)		
Time related (R_____)		
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SECTION NO. 1

PRELIMINARIES

SECTION SUMMARY

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Section No. 1
SECTION SUMMARY

SECTION NO. 2
BUILDING WORKS

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BUILDING WORKS</u> <u>BILL NO. 1</u> <u>EARTHWORKS</u> <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> <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials</u> <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> <u>Project particular specifications</u> <p>The specifications particular to this project are included in C3.2 Particular Specifications: Construction Works included in Envelope A Volume 1 of 2 of the tender documents. The Contractor is to take cognisance of them when pricing the relevant items in the Bill of Quantities as no extras arising out of their failure to do so will be entertained</p> <u>Nature of ground</u> <p>A soils investigation has been carried out on the site by the Geotechnical report is included in Part C5 of these Bills of Quantities</p> <u>Carting away of excavated material</u> <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> <u>Filling</u> <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>				
Carried to Collection			R	
Section No. 2				
Bill No. 1				
Earthworks				

		Unit	Quantity	Rate	Amount
<u>Filling and layer work materials</u>					
References such as 'G1', 'G2', etc. and 'C1', 'C2', etc. in descriptions of filling and layer work materials refer to corresponding references in the document 'Guidelines for Road Construction Materials. TRH 14 : 1985' compiled by the Committee of State Road Authorities and the properties set out therein for each kind shall be applicable to the respective materials described hereinafter					
<u>EXCAVATION OTHER THAN BULK</u>					
<u>Excavation in earth not exceeding 2m deep</u>					
1	Reduced levels under floors	m ³	215		
	DC 187 SB 28				
2	Trenches	m ³	139		
	DC 14 SB 113 GH 12				
3	Holes	m ³	162		
	DC 98 SB 64				
4	Retaining wall footings	m ³	74		
	DC 74				
<u>Excavation in earth exceeding 2m and not exceeding 4m deep</u>					
5	Holes	m ³	29		
	DC 29				
<u>Extra over trench and hole excavations in earth for excavation in</u>					
6	Soft rock	m ³	74		
	DC 37 SB 35 GH 2				
7	Hard rock	m ³	38		
	DC 19 SB 18 GH 1				
<u>Back excavation of vertical sides of excavations in earth for working space including backfilling compacted to 98% Mod AASHTO density</u>					
8	Exceeding 500mm and not exceeding 1,5m deep for placing and removing formwork to walls etc, 1000mm away from excavated face	m ²	420		
	DC 414 SB 6				
9	Exceeding 1,5m and not exceeding 3,0m deep for placing and removing formwork to walls etc, 1000mm away from excavated face	m ²	282		
	SB 282				
<u>Excavation for working space in rock</u>					
10	Extra over for excavation in soft rock	m ³	26		
	DC 6 SB 20				
Carried to Collection					R
Section No. 2					
Bill No. 1					
Earthworks					

		Unit	Quantity	Rate	Amount
11	Extra over for excavation in hard rock DC 2 SB 10 <u>Extra over all excavations for loading, carting and dumping excavated material (no allowance made for increase in bulk)</u>	m ³	12		
12	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor DC 308 SB 91 GH 7 <u>Risk of collapse of excavations</u>	m ³	406		
13	Sides of trench and hole excavations not exceeding 1,5m deep DC 112 GH 29	m ²	141		
14	Sides of trench and hole excavations exceeding 1,5m deep SB 177 <u>Keeping excavations free of water</u>	m ²	177		
15	Keeping excavations free of all water other than subterranean water (data centre) I 1	Item			
16	Keeping excavations free of all water other than subterranean water (services building) I 1	Item			
17	Keeping excavations free of all water other than subterranean water (guard house) I 1 <u>FILLING ETC OTHER THAN BULK</u> <u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density</u>	Item			
18	Under floors, steps, pavings, etc. DC 3 GH 2	m ³	5		
19	Backfilling to trenches, holes, etc. DC 94 SB 114 GH 5 <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>	m ³	213		
20	Under floors, steps, pavings, etc. DC 3 GH 2	m ³	5		
21	Backfilling to trenches, holes, etc. DC 30	m ³	30		
Carried to Collection				R	
Section No. 2					
Bill No. 1					
Earthworks					

		Unit	Quantity	Rate	Amount
	<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>				
22	Under floors, steps, pavings, etc. DC 3 GH 2	m³	5		
	<u>Filling of coarse river sand supplied by the contractor, consolidated</u>				
23	Under floors etc. DC 1 GH 1	m³	2		
	<u>Compaction of surfaces</u>				
24	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 DC 22 GH 13	m²	35		
	<u>WEED KILLERS, INSECTICIDES, ETC</u>				
	<u>Soil insecticide in accordance with SANS 5859, applied by a registered pest control company and guaranteed against termite infestation for ten years</u>				
25	Under floors etc. including forming and poisoning shallow furrows against foundation walls etc., filling in furrows and ramming DC 1874 SB 279 GH 18	m²	2 171		
	<u>TESTS</u>				
	<u>Prescribed tests to determine degree of compaction or other properties of ground or filling</u>				
26	Modified AASHTO Density test DC 30 SB 10	No	40		
Carried to Collection					
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Earthworks					

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SECTION NO. 2
BUILDING WORKS
BILL NO. 1
EARTHWORKS
COLLECTION

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Section No. 2
Bill No. 1
Earthworks

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BUILDING WORKS</u> <u>BILL NO. 2</u> <u>CONCRETE, FORMWORK AND REINFORCEMENT</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials</u>				
<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>				
<u>Project particular specifications</u>				
<p>The specifications particular to this project are included in C3.2 Particular Specifications: Construction Works included in Envelope A Volume 1 of 2 of the tender documents. The Contractor is to take cognisance of them when pricing the relevant items in the Bill of Quantities as no extras arising out of their failure to do so will be entertained</p>				
<u>Cost of tests</u>				
<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 for approval. 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>				
<u>Lightweight concrete</u>				
<p>Lightweight concrete shall have a density of 600kg/m³ for the top 50mm and 400kg/m³ for the remaining thickness. The minimum thickness at outlets, channels, etc. shall be 50mm</p>				
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Section No. 2				
Bill No. 2				
Concrete, Formwork And Reinforcement				

	Unit	Quantity	Rate	Amount
<u>Formwork</u>				
Descriptions of formwork shall be deemed to include use and waste only (except where described as 'left in' or 'permanent'), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use				
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				
Formwork to soffits of solid slabs etc. shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described				
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				
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				
<u>UNREINFORCED CONCRETE CAST ON/IN FORMWORK</u>				
<u>20MPa/19mm concrete</u>				
1	Plinths for mechanical plant, etc.	m ³	6	
	DC 5 SB 1			
<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
<u>10MPa/19mm concrete</u>				
2	Surface blinding under footings and bases	m ³	16	
	DC 10 SB 5 GH 1			
3	Mass concrete fill under bases	m ³	29	
	DC 29			
<u>REINFORCED CONCRETE CAST ON/IN FORMWORK</u>				
<u>30MPa/19mm concrete</u>				
4	Strip footings	m ³	19	
	DC 5 SB 14			
5	Retaining wall footings	m ³	25	
	DC 25			
Carried to Collection			R	
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Concrete, Formwork And Reinforcement				

		Unit	Quantity	Rate	Amount
6	Bases	m³	23		
	DC 22 SB 1				
7	Slabs including beams and inverted beams	m³	299		
	DC 274 SB 25				
8	Slabs in service ducts	m³	10		
	SB 10				
9	Inverted bearer beams to slabs	m³	110		
	DC 110				
10	Independent and wall beams	m³	46		
	DC 31 SB 13 GH 2				
11	Stairs including landings, beams and inverted beams	m³	3		
	DC 2 SB 1				
12	Filling to cavity of hollow brick wall	m³	114		
	DC 102 SB 12				
13	Walls in foundations (Provisional)	m³	2		
	DC 2				
14	Walls	m³	13		
	DC 13				
15	Columns in foundations (Provisional)	m³	20		
	DC 14 SB 6				
16	Columns	m³	1		
	DC 1				
	<u>30MPa/19mm concrete with Xypex Admx C-500 NF</u>				
	<u>1,5 percent by weight additive in strict accordance</u>				
	<u>with the manufacturer's instructions</u>				
17	Filling to cavity of hollow brick wall (Provisional)	m³	3		
	DC 3				
	<u>REINFORCED CONCRETE CAST AGAINST</u>				
	<u>EXCAVATED SURFACES</u>				
	<u>30MPa/19mm concrete</u>				
18	Strip footings	m³	3		
	GH 3				
19	Bases	m³	19		
	DC 10 SB 9				
20	Surface beds cast in panels on waterproofing	m³	3		
	DC 2 GH 1				
	<u>TEST CUBES</u>				
	<u>Test cubes</u>				
21	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	60		
	DC 40 SB 20				
Carried to Collection					
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Concrete, Formwork And Reinforcement					

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		Unit	Quantity	Rate	Amount
<u>CONCRETE SUNDRIES</u>					
<u>Finishing top surfaces of concrete smooth with a wood float</u>					
22	Surface beds, slabs, etc.	m ²	1 288		
	DC 1167 SB 108 GH 13				
<u>Finishing top surfaces of concrete smooth with an even brushed broom finish</u>					
23	Surface beds to ramps, etc.	m ²	65		
	DC 65				
<u>Finishing top surfaces of concrete smooth with a power float</u>					
24	Surface beds, slabs, etc.	m ²	445		
	DC 235 SB 210				
<u>ROUGH FORMWORK (DEGREE OF ACCURACY II) (CPAP WORK GROUP NO. 111)</u>					
<u>Rough formwork to sides</u>					
25	Bases (Provisional)	m ²	79		
	DC 77 SB 2				
26	Ground beams (Provisional)	m ²	97		
	DC 61 SB 36				
27	Rectangular columns in foundations (Provisional)	m ²	222		
	DC 139 SB 83				
28	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	192		
	DC 92 SB 100				
29	Sloping and stepped outer edges of stairs not exceeding 300mm high extreme	m	11		
	DC 8 SB 3				
<u>Rough formwork to soffits</u>					
30	Slabs not exceeding 250mm thick	m ²	46		
	SB 46				
31	Slabs not exceeding 250mm thick, with sloping soffits	m ²	20		
	SB 20				
<u>Rough formwork to sides and soffits</u>					
32	Inverted bearer beams propped up not exceeding 1.5m high	m ²	612		
	DC 612				
33	Beams propped up exceeding 3.5m and not exceeding 5.0m high	m ²	384		
	DC 245 SB 120 GH 19				
Carried to Collection					R
Section No. 2					
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Concrete, Formwork And Reinforcement					

		Unit	Quantity	Rate	Amount
<u>SMOOTH FORMWORK (DEGREE OF ACCURACY II)</u>					
<u>(CPAP WORK GROUP NO. 111)</u>					
<u>Smooth formwork to sides</u>					
34	Walls in foundations (Provisional)	m ²	11		
	DC 11				
35	Walls	m ²	67		
	DC 67				
36	Isolated beams	m ²	15		
	DC 15				
37	Isolated curved beams, circular on plan to radius not exceeding 3m	m ²	6		
	DC 6				
38	Rectangular columns	m ²	6		
	DC 6				
39	Rectangular columns with total height exceeding 3.5m and not exceeding 5m above bearing level	m ²	7		
	DC 7				
<u>Smooth formwork to soffits</u>					
40	Isolated beams	m ²	6		
	DC 6				
41	Isolated beams with curved soffits, to 2000 radius	m ²	2		
	DC 2				
<u>Boxing in smooth formwork to form</u>					
42	25 x 25mm Chamfers along top or bottom edges (provisional)	m	35		
	DC 35				
<u>PERMANENT FORMWORK (CPAP WORK GROUP NO. 111)</u>					
<u>VoidPro 0,8mm galvanised steel permanent decking system to soffits</u>					
43	VP-115 profile decking for slabs, with ends laid on brick walls or concrete beams	m ²	685		
	DC 475 SB 210				
44	VP-200 profile decking for slabs, with ends laid on brick walls or concrete beams	m ²	1 450		
	DC 1450				
45	Extra over steel permanent decking system for temporary propping, not exceeding 1200mm high, during pouring and curing of concrete work. Propping to be of suitable timber posts, plates, etc. as required by decking manufacturer. All material not expected to be recovered for re-use	m ²	1 900		
	DC 1691 SB 209				
Carried to Collection				R	
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Concrete, Formwork And Reinforcement					

						Unit	Quantity	Rate	Amount
46	VPB-220 Beams, with ends laid on brick walls or concrete beams					m	186		
	DC	144	SB	42					
47	VPC-115 Closure piece, including stitching screws (6 No)					No	1 621		
	DC	987	SB	634					
48	VPC-200 Closure piece, including stitching screws (6 No)					No	2 089		
	DC	2089							
	<u>MOVEMENT JOINTS ETC</u>								
	<u>'Sondor Jointex' closed cell expanded polyethylene joint former with hinged temporary blocking piece between vertical concrete and brick surfaces</u>								
49	20mm Joints not exceeding 300mm high					m	42		
	DC	20	GH	22					
	<u>Saw-cut joints</u>								
50	Saw-cut joint in top of concrete formed of a 3mm x 75mm first cut not later than 1 day after casting concrete and 10mm x 35mm second cut at top of joint made 21 days after casting					m	40		
	DC	40							
	<u>REINFORCEMENT (PROVISIONAL) (CPAP WORK GROUP NO. 114)</u>								
	<u>Mild steel reinforcement to structural concrete work</u>								
51	8mm Diameter bars					Tonnes	1.50		
	DC	1.5							
52	10mm Diameter bars					Tonnes	2.50		
	DC	2.5							
53	12mm Diameter bars					Tonnes	1.00		
	DC	1							
	<u>High tensile steel reinforcement to structural concrete work</u>								
54	8mm Diameter bars					Tonnes	3.93		
	DC	3.49	SB	0.4	GH	0.04			
55	10mm Diameter bars					Tonnes	6.27		
	DC	5.38	SB	0.82	GH	0.07			
56	12mm Diameter bars					Tonnes	18.80		
	DC	16.15	SB	2.43	GH	0.22			
57	16mm Diameter bars					Tonnes	5.70		
	DC	4.34	SB	1.19	GH	0.17			
58	20mm Diameter bars					Tonnes	13.28		
	DC	11.51	SB	1.62	GH	0.15			
	Carried to Collection							R	
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						Unit	Quantity	Rate	Amount
59	25mm Diameter bars					Tonnes	12.64		
	DC	10.86	SB	1.63	GH	0.15			
60	32mm Diameter bars					Tonnes	6.24		
	DC	5.38	SB	0.79	GH	0.07			
	<u>Fabric reinforcement</u>								
61	Mesh Ref 395 fabric reinforcement in concrete surface beds etc.					m ²	70		
	DC	70							
62	Mesh Ref 395 fabric reinforcement in concrete walls etc.					m ²	30		
	DC	30							
Carried to Collection									
Section No. 2									
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Concrete, Formwork And Reinforcement									

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SECTION NO. 2

BUILDING WORKS

BILL NO. 2

CONCRETE, FORMWORK AND REINFORCEMENT

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Bill No. 2

Concrete, Formwork And Reinforcement

	Unit	Quantity	Rate	Amount
<p><u>SECTION NO. 2</u></p> <p><u>BUILDING WORKS</u></p> <p><u>BILL NO. 3</u></p> <p><u>MASONRY</u></p> <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> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary items or materials</u></p> <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><u>Project particular specifications</u></p> <p>The specifications particular to this project are included in C3.2 Particular Specifications: Construction Works included in Envelope A Volume 1 of 2 of the tender documents. The Contractor is to take cognisance of them when pricing the relevant items in the Bill of Quantities as no extras arising out of their failure to do so will be entertained</p> <p><u>Sizes in descriptions</u></p> <p>Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick</p> <p><u>Cement Mortar</u></p> <p>Unless otherwise described, all brickwork shall be built in 1:5 cement mortar</p> <p><u>Hollow walls etc:</u></p> <p>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</p> <p>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</p>				
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	Unit	Quantity	Rate	Amount
<p>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 'Brixeal' bitumen emulsion waterproofing coating</p> <p><u>Face bricks</u></p> <p>Bricks shall be ordered timeously to obtain uniformity in size and colour</p> <p><u>Pointing</u></p> <p>Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc.</p> <p><u>Cleaning</u></p> <p>To prevent staining of face brickwork, the contractor is required to provide cover during building or renovating operations. Refer to Clay Brick Association Clay Masonry Technical Guide, Part 6</p> <p><u>Samples</u></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><u>Sample panels</u></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><u>BRICKWORK IN FOUNDATIONS (PROVISIONAL)</u></p> <p><u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar</u></p>				
1				
<p>One brick walls</p> <p>DC 13 SB 85</p>				
2				
<p>270mm Hollow walls of two half brick skins, including butterfly type wall ties and cavities filled with concrete (filling elsewhere measured)</p> <p>SB 192 GH 10</p>				
3				
<p>370mm Hollow walls of two half brick skins, including butterfly type wall ties and cavities filled with concrete (filling elsewhere measured)</p> <p>DC 678</p>				
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		Unit	Quantity	Rate	Amount
<u>BRICKWORK IN SUPERSTRUCTURE</u>					
<u>Brickwork of NFP bricks (7 MPa nominal compressive strength) in class II mortar</u>					
4	Half brick walls	m ²	171		
	DC 165 GH 6				
5	One brick walls	m ²	1 170		
	DC 1079 SB 91				
6	270mm Hollow walls of two half brick skins, including butterfly type wall ties	m ²	1 021		
	DC 722 SB 265 GH 34				
7	400mm Hollow walls of one half brick and one one brick skins, including butterfly wall ties	m ²	33		
	DC 33				
8	450mm Hollow walls of one half brick and one one brick skins, including butterfly wall ties	m ²	51		
	DC 51				
<u>Brick-on-edge header course sills in brickwork of NFP bricks in class II mortar</u>					
9	Extra over for labour item in forming 220mm wide sills set sloping at 30 degree rake and slightly projecting	m	44		
	DC 41 GH 3				
<u>Brickwork Sundries</u>					
10	40mm PVC weephole sleeve pipe not exceeding 250mm long, built into brickwalls	No	20		
	DC 20				
11	Splayed mortar fillets one course high in bottom of 50mm wide cavities, including leaving open perpend at 1,0m centres	m	278		
	DC 213 SB 50 GH 15				
12	Closing 50mm cavities of hollow walls vertically with brickwork half brick wide	m	163		
	DC 100 SB 44 GH 19				
13	Closing 50mm cavities of hollow walls horizontally with one course brickwork	m	162		
	DC 118 SB 28 GH 16				
<u>Turning pieces to lintels etc</u>					
14	270mm Wide turning pieces	m	111		
	DC 77 SB 26 GH 8				
<u>Bagging of 1:3 cement and sand mixture</u>					
15	Outer face of inner skin of cavity brick walls, including two coats bituminous paint	m ²	1 170		
	DC 912 SB 224 GH 34				
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		Unit	Quantity	Rate	Amount
	<u>2,8mm Galvanised brick reinforcement</u>				
16	75mm Wide high tensile steel brick reinforcement well lapped at all angles and passings and built into brick walls horizontally	m	795		
	DC 765 GH 30				
17	150mm Wide high tensile steel brick reinforcement well lapped at all angles and passings and built into brick walls horizontally, in foundation walls (Provisional)	m	1 089		
	DC 144 SB 945				
18	150mm Wide high tensile steel brick reinforcement well lapped at all angles and passings and built into brick walls horizontally	m	5 853		
	DC 5301 SB 552				
	<u>Prestressed fabricated concrete lintels including necessary temporary supports</u>				
19	115 x 76mm High 'U' profile prestressed reinforced concrete lintels including building in over openings, in lengths not exceeding 3,0m	m	269		
	DC 228 SB 27 GH 14				
20	115 x 76mm High 'U' profile prestressed reinforced concrete lintels including building in over openings, in lengths exceeding 3,0m and not exceeding 4,5m	m	65		
	DC 27 SB 25 GH 13				
21	115 x 76mm High 'U' profile prestressed reinforced concrete lintels including building in over openings, in lengths exceeding 4,5m and not exceeding 6,0m	m	134		
	DC 134				
	<u>Winlin hitec lintel beams</u>				
22	190 x 200mm high Winlin 200 pre-cast lintel in single unit 4500mm long , built vertically in screen walls	No	11		
	DC 11				
	<u>Bosun concrete products</u>				
23	588 x 288 x 50mm Thick Cosmopolitan coping	m	55		
	DC 55				
	<u>Galvanised hoop iron cramps, ties, etc</u>				
24	30 x 1,6mm Cramp 500mm long with one end fixed to timber and other end built into brickwork	No	168		
	DC 160 GH 8				
25	30 x 1,6mm Wall tie 500mm long with one end shot pinned to concrete and other end built into brickwork (provisional)	No	60		
	DC 60				
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		Unit	Quantity	Rate	Amount
26	30 x 1,6mm Wall tie 500mm long with one end shot pinned to steel column and other end built into brickwork (provisional)	No	40		
	DC 40				
	<u>FACE BRICKWORK</u>				
	<u>Makana Brick Heritage Travertine FBX face bricks pointed with recessed horizontal and vertical joints</u>				
27	Extra over brickwork for face brickwork in foundations (Provisional)	m ²	30		
	DC 30				
28	Extra over brickwork for face brickwork	m ²	70		
	DC 70				
29	220mm Copings on top of one brick walls	m	40		
	DC 40				
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	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BUILDING WORKS</u> <u>BILL NO. 4</u> <u>WATERPROOFING</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials</u>				
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<u>Project particular specifications</u>				
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<u>Waterproofing</u>				
<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 applicator</p>				
<u>Preparation of substrata</u>				
<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>				
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		Unit	Quantity	Rate	Amount
<u>DAMPPROOFING OF WALLS AND FLOORS</u>					
<u>One layer 375 micron embossed polyethylene dampproof course (SANS 952-1985 type B)</u>					
1	In walls, lapped 150mm at all angles and passings. DC 151 SB 28 GH 5	m ²	184		
<u>One layer 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape</u>					
2	Under surface beds DC 24 GH 14	m ²	38		
<u>JOINT SEALANTS ETC. (CPAP Work Group No 120)</u>					
<u>'Sikaflex Pro 3' Silicone sealing compound including backing cord, bond breaker, primer, etc., including correction of joint filler due to shrinkage after 6 months</u>					
3	10 x 10.5mm In saw cut joints in floors DC 20 GH 22	m	42		
4	20 x 13.5mm In construction joints in floors including raking out expansion joint filler as necessary DC 40	m	40		
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Waterproofing

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BUILDING WORKS</u> <u>BILL NO. 5</u> <u>ROOF COVERINGS</u>				
<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>				
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<u>PROFILED METAL SHEETING AND ACCESSORIES</u>				
<u>General</u>				
<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>				
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	Unit	Quantity	Rate	Amount
<u>Erection, handling and storage</u>				
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				
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				
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				
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				
<u>Cleaning, etc:</u>				
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				
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.				
<u>ZIP-TEK 420 SHEETING</u>				
<u>Profile</u>				
The profile is roll-formed from certified material complying Aluminium 3004. The profile shall have a male and female upstand with an upstand 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				
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Roof Coverings				

	Unit	Quantity	Rate	Amount
Flashing 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 <u>0,9mm Thick 'Hulamin 3004 Aluminium ZIP-TEK 420' Aluminium sheeting and accessories in single lengths with Stucco embossed PVDF finish (Colour Charcoal Grey) on external face and standard backing coat on internal face and accessories concealed fixed through 75mm thick 'Factorylite' insulation (Factorylite insulation elsewhere measured) to timber purlins or rails, with 'Zip-Tek' Aluminium Halts fixed with stainless steel self-tapping screws , installation region: from 100m to 400m off the coast, in strict accordance with the manufacturers instructions</u>				
1	m ²	32		
DC 32 <u>0,9mm Thick 'Hulamin 3004 Aluminium ZIP-TEK 420' Aluminium sheeting and accessories in single lengths with Stucco embossed PVDF finish (Colour Charcoal Grey) on external face and standard backing coat on internal face and accessories concealed fixed through 75mm thick 'Factorylite' insulation (Factorylite insulation elsewhere measured) to steel purlins or rails, with 'Zip-Tek' Aluminium Halts fixed with stainless steel self-tapping screws, installation region: from 100m to 400m off the coast, in strict accordance with the manufacturers instructions</u>				
2	m ²	2 322		
DC 2064 SB 234 GH 24				
3	m	48		
DC 48				
4	m	60		
DC 60				
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		Unit	Quantity	Rate	Amount
5	Extra over roof covering for 90 degree bullnose to 2850mm radius, at eaves ends (ref section C-C on drawing DC-WD-AR-1202)	m	13		
	DC 13				
	<u>0,8mm Thick ' Hulamin 3004' Aluminium flashings and accessories with Stucco embossed PVDF finish (Colour Charcoal Grey) on external face and standard backing coat on internal face, fixed to roof sheeting with sliding brackets of installation region: from 100m to 400m off the coast, in strict accordance with the manufacturers instructions</u>				
6	Headwall flashings 500mm girth (three times bent along length) and notched on site to suit roof profile	m	55		
	DC 55				
7	Sidewall flashings 550mm girth (three times bent along length)	m	44		
	DC 38 SB 6				
8	Sidewall flashings 550mm girth (three times bent along length) circular on elevation, along bullnose end to 2850mm radius	m	12		
	DC 12				
9	Facia or barge flashing 680mm girth (two times bent along length) and with two polystrip sealer dust proofing to suit 'Zip-Tek 420' roof sheets along length	m	135		
	DC 114 GH 21				
10	Facia or barge flashings 680mm girth (two times bent along length) circular on elevation, along bullnose end to 2850mm radius and with two polystrip sealer dust proofing to suit 'Zip-Tek 420' roof sheets along length	m	11		
	DC 11				
11	Facia or barge flashing 730mm girth (two times bent along length) and with two polystrip sealer dust proofing to suit 'Zip-Tek 420' roof sheets along length	m	67		
	DC 12 SB 55				
12	Facia or barge flashing 860mm girth (two times bent along length) and with two polystrip sealer dust proofing to suit 'Zip-Tek 420' roof sheets along length	m	6		
	DC 6				
13	Counter flashings 300mm girth (three times bent along length)	m	99		
	DC 93 SB 6				
14	Counter flashings 300mm girth (three times bent along length) circular on elevation along bullnose end to 2850mm radius	m	12		
	DC 12				
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		Unit	Quantity	Rate	Amount
15	Broad flute serrated closer to suit 'Ziptech 420' profile, including broad flute polyclosers	m	55		
	DC 55				
	<u>Sundries</u>				
16	38 x 38 x 3mm Aluminium angle (provisional)	m	208		
	DC 132 SB 55 GH 21				
17	76 x 76 x 3mm Aluminium angle (provisional)	m	50		
	DC 50				
	<u>ROOF AND WALL LINING AND INSULATION (CPAP Work Group No 122)</u>				
	<u>'Isover Saint-Gobain' 75mm Factorylite" White faced insulation laid over purlins at approximately 2000mm centres including white PVC coated galvanised steel straining wires at 300mm centres installed in strict accordance with the manufacturer's instructions:</u>				
18	75mm Thick insulation laid taut over purlins (at approximately 2000mm centres), fixed concurrent with roof covering with and including PVC coated galvanised steel straining wires at 300mm centres and tied down top and bottom (after tensioning) with galvanised hoop iron ties.	m²	1 811		
	DC 1588 SB 205 GH 18				
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<u>Fixing</u>				
<p>Items described as 'nailed' shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete</p>				
<p>Items described as 'plugged' shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as 'bolted', the bolts have been given elsewhere</p>				
<u>Joinery</u>				
<p>Descriptions of frames shall be deemed to include frames, transoms, rails, etc.</p>				
<p>Descriptions of hardwood joinery shall be deemed to include sinking and pelleting heads and nuts of bolts</p>				
<u>Decorative thermosetting plastic laminate covering</u>				
<p>Laminate covering shall be glued under pressure and edge strips of same shall be butt jointed at junctions with adjacent similar finish</p>				
<u>General</u>				
<p>All glazing to doors or frames is elsewhere measured</p>				
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		Unit	Quantity	Rate	Amount
9	44mm FLB-B flush panel double door size 1475 x 2050mm high with rebated meeting styles, the one leaf 813mm wide and the other leaf 675mm wide (door schedule ref D10)	No	1		
	DC 1				
10	44mm FLB-B flush panel double door size 1626 x 2347mm high with rebated meeting styles, comprising two leaves 813mm wide (door schedule ref D15)	No	2		
	DC 2				
	<u>Solid flush doors faced both sides with commercial veneer with two hardwood edges, hung to timber or steel frames</u>				
11	40mm Door size 894 x 2050mm high (door schedule ref D01)	No	2		
	DC 2				
12	40mm Door size 813 x 2050mm high (door schedule ref D02; D05)	No	4		
	DC 4				
13	40mm Double door size 1469 x 2350mm high with rebated meeting styles, the one leaf 813mm wide and the other leaf 656mm wide (door schedule ref D03)	No	1		
	DC 1				
14	40mm Door size 813 x 2000mm high (door schedule ref D06)	No	4		
	DC 3 GH 1				
15	40mm Door size 813 x 2350mm high (door schedule ref D13)	No	3		
	DC 3				
	<u>FRAMED FRAMES ETC</u>				
	<u>Wrought meranti</u>				
16	70 x 108mm Rebated frames, plugged	m	124		
	DC 119 GH 5				
	<u>BEADS, ARCHITRAVES, ETC</u>				
	<u>Wrought meranti</u>				
17	19mm Quadrant beads	m	198		
	DC 188 GH 10				
18	38 x 50mm Rebated, splayed and grooved weather boards fixed in and including grooves in doors	m	9		
	DC 9				
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Carpentry And Joinery					

	Unit	Quantity	Rate	Amount
<u>FITTINGS: CUPBOARDS TO KITCHENS, BEDROOMS, ETC</u>				
<u>General</u>				
The following cupboard fittings have been given as complete units i.e. the components of the units have not been given separately. Descriptions of such units shall therefore be deemed to include all components, assembling, housing, notching, glueing, blocking, planting-on and screwing with countersunk screws, edge strips, thermosetting plastic laminate, glass, ironmongery, metalwork, paint or varnish finishes, etc. Prices are to include for all necessary filler pieces, sealing against walls, etc.				
<u>References</u>				
References given in descriptions below refer to the respective types of fittings detailed on the architect's design drawings annexed to these bills of quantities				
<u>Built-in joinery units</u>				
19				
Sink cupboard (sink elsewhere measured) built primarily of 16mm Melawood 'Cannero Fusion' board with matching impact edging and 32mm Rustenberg granite worktop with cut out for sink unit, overall size 3800mm long x 550mm wide x 900mm high with 600mm wide worktop, including sides, bottom, divisions, treated timber shelves on 50 x 50mm L-shaped powder coated support brackets, back, hinged doors with 320mm slim brushed cupboard handles, 100mm high shutterply skirting, etc. (drawing number DC-WD-AR-1508 & 1509 - Recreational joinery details)		No	1	
DC 1				
20				
Sink cupboard (sink elsewhere measured) built primarily of 16mm Melawood 'Cannero Fusion' board with matching impact edging and 32mm Rustenberg granite worktop with cut out for sink unit, overall size 1450mm long x 550mm wide x 900mm high with 600mm wide worktop, including sides, bottom, divisions, treated timber shelves on 50 x 50mm L-shaped powder coated support brackets, back, hinged doors with 320mm slim brushed cupboard handles, 100mm high shutterply skirting, etc. (drawing number DC-WD-AR-1510 & 1511 - Guard House joinery details)		No	1	
GH 1				
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		Unit	Quantity	Rate	Amount
21	Wall cupboard built primarily of 16mm Melawood 'Cannero Fusion' board with matching impact edging and 32mm Rustenberg granite worktop, overall size 1865mm long x 550mm wide x 900mm high with 600mm wide worktop, including sides, bottom, divisions, treated timber shelves on 50 x 50mm L-shaped powder coated support brackets, back, hinged doors with 320mm slim brushed cupboard handles, 100mm high shutterply skirting, etc. (drawing number DC-WD-AR-1510 & 1511 - Guard House joinery details)	No	1		
	GH 1				
22	Wall cupboard built primarily of 16mm Melawood 'Cannero Fusion' board with matching impact edging and 32mm Rustenberg granite worktop, overall size 2460mm long x 550mm wide x 900mm high with 600mm wide worktop, including sides, bottom, divisions, treated timber shelves on 50 x 50mm L-shaped powder coated support brackets, back, hinged doors with 320mm slim brushed cupboard handles, 100mm high shutterply skirting, etc. (drawing number DC-WD-AR-1510 & 1511 - Guard House desk)	No	1		
	GH 1				
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Bill No. 6

Carpentry And Joinery

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u>				
<u>BUILDING WORKS</u>				
<u>BILL NO. 7</u>				
<u>CEILINGS PARTITIONS AND ACCESS FLOORING</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials</u>				
<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>				
<u>Project particular specifications</u>				
<p>The specifications particular to this project are included in C3.2 Particular Specifications: Construction Works included in Envelope A Volume 1 of 2 of the tender documents. The Contractor is to take cognisance of them when pricing the relevant items in the Bill of Quantities as no extras arising out of their failure to do so will be entertained</p>				
<u>Descriptions</u>				
<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 'Rhinoboard' 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>				
Carried to Collection			R	
Section No. 2				
Bill No. 7				
Ceilings Partitions And Access Flooring				

	Unit	Quantity	Rate	Amount
<u>Ceilings</u>				
Unless otherwise described ceilings shall be deemed to be horizontal				
<u>Bulkheads</u>				
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				
<u>Steel components</u>				
All steel components for ceilings, partitions, etc are to be galvanised in accordance with SANS 121				
<u>SUSPENDED CEILINGS</u>				
<u>600 x 600 x 9mm Thick Pelican Econotile white vinylclad gypsum board ceiling panels with aluminium foil backing laid into Pelican Econogrid aluminium pre-painted exposed tee suspension system including fire safety punch outs, main and cross tees, necessary hangers, grids, etc.</u>				
1				
Ceilings suspended below steel purlins 1.8 extreme				
DC	558	GH	12	
<u>600 x 600 x 30mm Thick purpose cut ceiling panels of IsoBoard high density rigid extruded polystyrene 100% closed cell insulation board laid in white aluminium pre-painted exposed Donn tee suspension system including main and cross tees, necessary hangers, grids, etc.</u>				
2				
Ceilings suspended below steel purlins 1.8 extreme				
DC	38			
<u>100mm Thick Isophen insulating ceiling panels supported along full lengths with and including galvanised angle iron at 1170mm centres</u>				
3				
Ceilings suspended not exceeding 1m below underside of steel trusses				
DC	530			
<u>Cornices, perimeter trims, etc. to suspended ceilings</u>				
4				
Donn SM25 25 x 25mm Pre-painted aluminium recessed shadowline wall angle, plugged				
DC	470	GH	22	
Carried to Collection				R
Section No. 2				
Bill No. 7				
Ceilings Partitions And Access Flooring				

	Unit	Quantity	Rate	Amount
<u>FIXED PARTITIONS (CPAP WORK GROUP NO. 138)</u>				
<u>Manufacturer's details</u>				
Gridnic Agencies				
2 Voortrekker Road, Mdantsane, East London, South Africa				
Tel: (043) 761 3166				
Mobile: (082) 900 0890				
Email: brett@gridnic.co.za				
Web: www.gridnic.co.za				
<u>FM Global approved Class 1 fire rated ISOPHEN sandwich panel system comprising 100mm thick POLYPHEN core clad both sides with 0.58mm chromodek frost white (Z-200 zinc substrate) fixed to and including 40 x 100 x 0.58mm chromodek floor channel and 40 x 40 x 0.58mm angles at suitable centres</u>				
5	m	38		
Partitioning 4165mm high fixed to underside of steel trusses				
DC 38				
6	No	3		
GRIDDOOR single pedestrian door size 800 x 2350mm high, comprising 37mm 15DV Expanded Polystyrene core clad on both sides with 0.5mm chromodek frost white (Z-200 Zinc Substrate) including 50mm GRIDDOOR aluminium (natural anodised) door frame c/w black neoprene doorseal on three sides of frame. Ironmongery elsewhere measured (D11)				
DC 3				
7	No	3		
GRIDDOOR double pedestrian door size 1475 x 2350mm high, comprising 37mm 15DV Expanded Polystyrene core clad on both sides with 0.5mm chromodek frost white (Z-200 Zinc Substrate) including 50mm GRIDDOOR aluminium (natural anodised) door frame c/w black neoprene doorseal on three sides of frame. Ironmongery elsewhere measured (D12)				
DC 3				
<u>Extra over FM Global approved Class 1 fire rated ISOPHEN partition for forming openings for windows, viewing panels, etc. (by others)</u>				
8	No	6		
Opening for view window (by others) size 1800 x 1000mm				
DC 6				
<u>SOLIDFEEL ACCESS FLOORING</u>				
<u>Manufacturer's details</u>				
Pentafloor (Pty) Ltd				
Carried to Collection			R	
Section No. 2				
Bill No. 7				
Ceilings Partitions And Access Flooring				

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	Unit	Quantity	Rate	Amount
<p>Tel: (011) 312 7901</p> <p>Mobile: (061) 476 0806</p> <p>Email: nikki.blake@bergvik.com</p> <p>Web: www.bergvik.com</p> <p><u>Bergvik ISO raised access floor system supplied by Bergvik Southern Africa, with a loading capacity of 20Kn/m</u></p>				
17				
<p>600 x 600 M335 standard floor panels on and including prefabricated dynamic raised access modular and steel substructure bolted together as per manufacturers specification comprising cold rolled factory assembled 80 x 40mm tubular beam sections and pedestal supports adjustable +25mm from nominal floor height with panels factory fitted with 600 x 600mm M335 "Granite" standard floor panels and equal and approved floor tiles, to a loading capacity of 20kN (access flooring to finish 1200mm above concrete sub-floor)</p>				
	m²	750		
DC 750				
18				
<p>Hole for not exceeding 50mm external diameter pipe through floor panel including sealing (Provisional)</p>				
	No	150		
DC 150				
19				
<p>Hole for not exceeding 150mm external diameter pipe through floor panel including sealing (Provisional)</p>				
	No	30		
DC 30				
20				
<p>600 x 600mm Air grille, including opposed blade dampers</p>				
	No	200		
DC 200				
21				
<p>600 x 600 x 38mm M335 Granite panel floor tiles, V20</p>				
	No	200		
DC 200				
22				
<p>Supplying, erecting, dismantling and removing from site sample of Bergvik access flooring. Sample size approximately 1200 x 1200 x 1200mm high</p>				
	Item			
I 1				
23				
<p>Panel lifing device</p>				
	No	4		
DC 4				
<u>Sundries to raised access flooring</u>				
24				
<p>Vacuum cleaning the floor void after installation of services</p>				
	m²	790		
DC 790				
25				
<p>Fire barrier 1200mm high between concrete sub-floor and floor panels (2 hour fire rating)</p>				
	m	15		
DC 15				
Carried to Collection				
Section No. 2				
Bill No. 7				
Ceilings Partitions And Access Flooring				

		Unit	Quantity	Rate	Amount
26	Cutting and fitting fire barrier around pipe not exceeding 50mm diameter, including sealing	No	5		
	DC 5				
27	Cutting and fitting fire barrier around pipe not exceeding 150mm diameter, including sealing	No	2		
	DC 2				
Carried to Collection					
Section No. 2					
Bill No. 7					
Ceilings Partitions And Access Flooring					

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SECTION NO. 2

BUILDING WORKS

BILL NO. 7

CEILINGS PARTITIONS AND ACCESS FLOORING

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Section No. 2

Bill No. 7

Ceilings Partitions And Access Flooring

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BUILDING WORKS</u> <u>BILL NO. 8</u> <u>FLOOR COVERINGS</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials</u>				
<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>				
<u>Project particular specifications</u>				
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<u>Adhesives and sealants</u>				
<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>				
<u>Carpets and floor coverings</u>				
<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>				
<u>SCREEDS, SEALERS, ETC</u>				
<u>Prepare surface, prime with BONDiTe and apply mixed LEVELiTe F30 self-levelling compound at a minimum thickness of 0.3mm, all in strict accordance with the manufacturers instructions</u>				
1	On screeded floors	m ²	240	
	DC 240			
Carried to Collection				R
Section No. 2				
Bill No. 8				
Floor Coverings				

		Unit	Quantity	Rate	Amount
	<u>Prepare surface and apply two coats VAPORITE +Plus moisture barrier, all in strict accordance with the manufacturers instructions</u>				
2	On screeded floors DC 240	m ²	240		
	<u>FLOOR COVERINGS</u>				
	<u>2mm Palettone SD directional static dissipative flexible PVC sheet flooring fixed with Polyflor approved adhesive and joints welded with a fully flexible coloured welding rod to produce hygienic continuous finished surface laid over and including an earthed grid of aluminium tape in No.27 conductive acrylic adhesive</u>				
3	On floors Un/A 3	m ²	3		
4	On floors in patterns (3 different colours) DC 237	m ²	237		
Carried to Collection					
Section No. 2					
Bill No. 8					
Floor Coverings					

Amount

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BUILDING WORKS
BILL NO. 8
FLOOR COVERINGS
COLLECTION

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Section No. 2
Bill No. 8
Floor Coverings

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BUILDING WORKS</u> <u>BILL NO. 9</u> <u>IRONMONGERY</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials</u>				
<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>				
<u>Project particular specifications</u>				
<p>The specifications particular to this project are included in C3.2 Particular Specifications: Construction Works included in Envelope A Volume 1 of 2 of the tender documents. The Contractor is to take cognisance of them when pricing the relevant items in the Bill of Quantities as no extras arising out of their failure to do so will be entertained</p>				
<u>Finishes to ironmongery</u>				
<p>Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered : CH Chromium plated : SC Satin chromium plated : SE Silver enamelled : GE Grey enamelled : AS Anodised silver : AB Anodised bronze : AG Anodised gold : ABL Anodised black : PB Polished brass : PL Polished and lacquered : PT Epoxy coated.</p>				
Carried to Collection			R	
Section No. 2 Bill No. 9 Ironmongery				

		Unit	Quantity	Rate	Amount
<u>Master keying, labelling, etc.</u>					
GGMK cylinders to form part of masterkey system for the ELIDZ. All cylinders and padlocks to be supplied under the commercial building master "GGMK" Key Control. (ELIDZ/GCP/New Building (Bushveld). Sample to be provided of code stamped on the cylinder and keys. To simplify i.e. ELISZ/GCP/eg. IW9 001, 002 etc and approved by Gary Whittaker. ELIDZ will require that 7 extra cylinders (Per Factory) be supplied under the Contract and these to be kept as spare cylinders In the ELIDZ Key Control Room. 2 x KK - key both sides, 3 x K/KB - key one side with knob turn on the other side. 2 x half cylinder is key one side only. (measured under attic stock) Labelling: All Keys To Be Labelled/Tagged Separately And Include The Following: Door number - "D 001" Description - "Workshop Entrance" Key Number - "ELIDZ/GCP/IW9 001" 3 Keys to be supplied per cylinder. 2 x for Tenant. 1 x for key room/cabinet					
<u>Ironmongery references</u>					
Ironmongery referred to in the descriptions below refer to the ironmongery schedules accompanying these bills of quantities, as prepared by Dormakaba					
<u>HINGES, FLOOR SPRING HINGES, BOLTS, PANIC BOLTS, ETC</u>					
<u>Dormakaba</u>					
1	2100mm Aluminium sinkless hinge (product code 5050) DC 13	No	13		
2	102 x 75 x 3mm Two ball bearing butt hinge (product code DBB-SS-009) DC 50 GH 2	No	52		
3	Standard continuous geared hinge (product code DCH-AL-S21) DC 2	No	2		
4	Alufab 200mm aluminium sinkless hinge with centre pin (product code 2040) (provisional) DC 2	No	2		
5	Alufab 150mm Aluminium flush bolt with keep let into metal or timber (product code M1519N) (provisional) DC 2	No	2		
6	153mm Manual flush bolt with heel let into metal or timber (product code DFB-SC-180) DC 11	No	11		
7	305mm Manual flush bolt with heel let into metal or timber (product code DFB-SC-181) DC 3	No	3		
Carried to Collection				R	
Section No. 2					
Bill No. 9					
Ironmongery					

		Unit	Quantity	Rate	Amount
<u>CATCHES, CABIN HOOKS, ETC</u>					
<u>Dormakaba</u>					
8	Halstead 200mm SC on brass cabin hook and eye including 100 x 100 x 75mm chamfered wrought meranti block twice oiled and plugged (product code 166) (provisional)	No	1		
	DC 1				
9	Dust proof strike (product code DPS-SS-032)	No	6		
	DC 6				
10	Adjustable roller bolt (product code DBC-SS-022)	No	4		
	DC 4				
11	ISEO 35mm Backset roller bolt lock with deadlock and profile cylinder piercing (provisional)	No	1		
	DC 1				
<u>LOCKS</u>					
<u>Dormakaba</u>					
12	CISA Anti thrust mortice nightlatch with holdback snib (product code 55250 57 20)	No	15		
	DC 15				
13	CISA Grand master keyed 65mm knob cylinder, 5 pin (product code 0G302-10-12)	No	17		
	DC 17				
14	CISA Grand master keyed 42,5mm half cylinder, 5 pin (product code 0G304-09-12) (provisional)	No	1		
	DC 1				
15	66mm Euro-profile bathroom / private cylinder (product code DBC006601)	No	1		
	GH 1				
16	Union "TRIMEC" AWR electric strike (product code TS101)	No	15		
	DC 15				
17	Cylinder deadlock (product code D037D SS)	No	1		
	DC 1				
18	Cylinder sash lock (product code D036S SS)	No	2		
	DC 1 GH 1				
19	Bathroom deadlock (product code DMWC-SS-008)	No	4		
	DC 4				
20	Bathroom WC indicator and turnknob (product code DWC-005)	No	3		
	DC 3				
21	Disable WC indicator and turnknob (product code DWC-006)	No	1		
	DC 1				
Carried to Collection					R
Section No. 2					
Bill No. 9					
Ironmongery					

		Unit	Quantity	Rate	Amount
22	Rebate component kit to suit mortice nightlatch DC 7	No	7		
	<u>HANDLES, FLUSH PULLS, ETC.</u>				
	<u>Dormakaba</u>				
23	400 x 30mm Offset tubular pull handle BTB, including fixing sets (product code DPH206BTB) (provisional) DC 1	No	1		
24	DPH301CP Pull handle BT fixed on and including 170 x 170 x 1.2mm thick stainless steel plate with cylinder cutout (right), four times countersunk holed and screwed (product code DHP-430-CR-SF 170 x 170) DC 16	No	16		
25	DPH301CP Pull handle BT fixed on and including 170 x 170 x 1.2mm thick stainless steel plate with cylinder cutout (left), four times countersunk holed and screwed (product code DHP-430-CL-SF 170 x 170) DC 13	No	13		
26	DPH301CP Pull handle BT fixed on and including 150 x 300 x 1.2mm thick stainless steel plate with cylinder cutout (left), six times countersunk holed and screwed (product code DHP-430-CL-SF 150 x 300) DC 3	No	3		
27	DPH301CP Pull handle BT fixed on and including 170 x 170 x 1.2mm thick stainless steel plate with no cylinder cutout, four times countersunk holed and screwed (product code DHPL-430-BL-SF 170 x 170) DC 2	No	2		
28	DPH301CP Pull handle BT fixed on and including 170 x 170 x 1.2mm thick stainless steel plate with no cylinder cutout, four times countersunk holed and screwed (product code DHPR-430-BL-SF 170 x 170) DC 2	No	2		
29	325 x 25mm Straight tubular pull handle with flange fixing (product code DPH301B) DC 2	No	2		
30	Lever handle on rose with cylinder escatcheons (product code CR003 Cyl SS) DC 1 GH 1	No	2		
31	149 x 19mm Straight tubular handle BT (product code DPH301C BT) DC 4	No	4		
Carried to Collection					R
Section No. 2					
Bill No. 9					
Ironmongery					

		Unit	Quantity	Rate	Amount
<u>PUSH PLATES AND KICKING PLATES</u>					
<u>Dormakaba</u>					
32	Grade 430 stainless steel kick plate (product code DKP-430-SF 300) of full width of 813mm door x 300mm high x 1,2mm thick, countersunk screwed (12 No) to timber door	No	2		
	DC 2				
<u>DOOR CLOSERS</u>					
<u>Dormakaba</u>					
33	EN 3-6 Parallel arm non hold open door closer (product code TS83 PA) with parallel arm bracket, fixed to timber or steel door and frame	No	5		
	DC 5				
34	EN 2-4 Parallel arm delayed action door closer (product code TS73V PA DC-PAB-SL) with parallel arm bracket, fixed to timber or steel door and frame	No	1		
	DC 1				
35	EN 2-4 Parallel arm non hold open door closer (product code TS73V PA-PAB-SL) with parallel arm bracket, fixed to timber or steel door and frame	No	4		
	DC 4				
36	Non hold open cam action slide channel door closer (product code TS91B-SL), fixed to timber or steel door and frame	No	3		
	DC 3				
37	Non hold open cam action slide channel door closer (product code TS92B-SL), fixed to timber or steel door and frame	No	3		
	DC 3				
38	Mechanical hold open cam action slide channel door closer (product code TS92B HO-SL), fixed to timber or steel door and frame	No	3		
	DC 3				
<u>LETTERS, NAMEPLATES, ETC.</u>					
<u>Dormakaba</u>					
39	150 x 150mm Disable person sign (product code DSS-133P), countersunk screwed to timber door	No	1		
	DC 1				
40	150 x 150mm Male/Female sign (product code DSS-132MF), countersunk screwed to timber door	No	2		
	DC 2				
Carried to Collection				R	
Section No. 2					
Bill No. 9					
Ironmongery					

		Unit	Quantity	Rate	Amount
41	150 x 150mm Fire hose reel sign (product code DSS-145FHR), countersunk screwed to timber door DC 3	No	3		
	<u>BATHROOM FITTINGS (CPAP Work Group No 132)</u>				
	<u>Franke</u>				
42	STRX 618 Stratos stainless steel soap dispenser size 304 x 100 x 134mm deep with curved front cover, cylinder lock with Franke standard key, inspection window on front, 0.8 litre soap tank and pull level, plugged and screwed to wall using stainless steel screws DC 4 GH 1	No	5		
43	STRX 671 Stratos stainless steel double toilet roll holder size 305 x 156 x 141mm deep with curved front cover, cylinder lock with Franke standard key, inspection window on front, plugged and screwed to wall using stainless steel screws DC 4 GH 1	No	5		
44	RODX600 Rodan stainless steel paper towel dispenser size 275 x 355 x 112mm deep with folded front cover, cylinder lock with Franke standard key, inspection windows on sides, filled with and including 300 pcs paper towels, plugged and screwed to wall using stainless steel screws DC 4 GH 1	No	5		
45	RODX605 Rodan stainless steel paper towel waste bin size 355 x 460 x 168mm deep with rounded edges, plugged and screwed to wall using stainless steel screws DC 4 GH 1	No	5		
	<u>Chairman Industries</u>				
46	32mm Diameter grade 304 18/10 stainless steel satin polished side grab rail (Code DL2) plugged to wall with stainless steel fixing screws DC 1	No	1		
47	32mm Diameter grade 304 18/10 stainless steel satin polished rear grab rail (Code SR2) plugged to wall with stainless steel fixing screws DC 1	No	1		
	<u>SUNDRIES</u>				
	<u>Sundries</u>				
48	6mm Diameter steel dowel 100mm long in and including mortice in timber and brickwork or concrete DC 40 GH 2	No	42		
Carried to Collection					
Section No. 2					
Bill No. 9					
Ironmongery					

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		Unit	Quantity	Rate	Amount
	<u>Dormakaba or equally approved</u>				
49	Drop plate (product code TS83 drop plate) (provisional) DC 1	No	1		
50	Round cylinder escatcheon (product code DCE-002 SS) (provisional) DC 1	No	1		
51	Wall buffer (product code DDH-SS-020) DC 2	No	2		
52	Hat and coat hook (product code DHC-SS-031B) DC 3	No	3		
53	Hat and coat hook (product code DHC-SS-030A) GH 1	No	1		
54	Floor mounted door stop (product code DDS-SS-017) DC 4 GH 1	No	5		
55	Narrow stile cylinder escutcheon (product code DCE-105 SS) (provisional) DC 1	No	1		
56	600mm Alufab extension rod (product code H469) (provisional) DC 1	No	1		
Carried to Collection					
Section No. 2					
Bill No. 9					
Ironmongery					

Amount

SECTION NO. 2
BUILDING WORKS
BILL NO. 9
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COLLECTION

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Section No. 2

Bill No. 9

Ironmongery

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BUILDING WORKS</u> <u>BILL NO. 10</u> <u>STRUCTURAL STEELWORK</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials</u>				
<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 and Engineer</p>				
<u>Project particular specifications</u>				
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<u>National treasury designated sectors instruction number 15 of 2016/2017</u>				
<p>Only locally produced or locally manufactured steel products and components for construction with a stipulated minimum threshold of 100 percent for local production and content will be considered in accordance with National treasury designated sectors instruction number 15 of 2016/2017</p>				
<u>Descriptions</u>				
<p>Descriptions of bolts shall be deemed to include nuts and washers</p>				
<p>Descriptions of columns and beams shall be deemed to include flat section base, top, bearer and connection plates</p>				
<p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete</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>				
Carried to Collection			R	
Section No. 2 Bill No. 10 Structural Steelwork				

		Unit	Quantity	Rate	Amount
<p>All structural steelwork to be fabricated in accordance with SANS 14713 Part 2. Dimensions and levels to be verified on site prior to manufacture. Any discrepancies found during site measure to be reported to and resolved by the Engineer prior to manufacture. All structural steel elements must be inspected by the Engineer prior to transporting to site. All bolts must be grade 8.8 unless otherwise specified by the Engineer</p> <p>All welds to be with E700XX electrodes, according to AWS or similar approved by the Engineer. All hot rolled structural steel members to be grade S355JR and plates to be grade 300WA. Purlins and girts to be pre-galvanised, unless otherwise described</p> <p>All structural steelwork inclusive of bolts, nuts, washers, plates, connections, etc., other than purlins & girts to be hot dipped galvanised in accordance with SANS 121 or ISO 1461</p> <p>All hot dipped members to be drilled, cut, welded, etc., prior to galvanising</p> <p>Prices to include for preparation of shop drawings for approval of the Engineer prior to manufacture. A minimum of 7 days must be allowed for checking of shop drawings</p> <p>Prices to include for fabrication, cutting, drilling, bending, welding, etc., delivery to site, and hoisting up and erecting into position</p> <p>Steel mass will be calculated according to the tables issued by the SA Institute of Steel Construction</p> <p><u>GALVANISED STEEL COLUMNS AND BEAMS</u></p> <p><u>Hot dipped galvanised members</u></p>					
1	CHS 152.4 x 6.0mm Circular hollow section posts DC 1.49	Tonnes	1.49		
2	IPE 200 x 22,4 kg/m I-section column DC 2.15	Tonnes	2.15		
3	UB 305 x 102 x 25 kg/m Universal column DC 0.99	Tonnes	0.99		
4	UC 203 x 203 x 52 kg/m Universal column DC 3.91	Tonnes	3.91		
5	Plates, angles, cleats, brackets, connections, bolts (grade 8.8), washers, etc DC 1.28	Tonnes	1.28		
Carried to Collection					R
Section No. 2					
Bill No. 10					
Structural Steelwork					

		Unit	Quantity	Rate	Amount
<u>GALVANISED STEEL PURLINS, GIRTS, BRACING, ETC</u>					
<u>Pre-galvanised members</u>					
6	150 x 75 x 20 x 2,0mm Cold formed lipped channel purlins (pre-punched)	Tonnes	1.34		
	SB 1.34				
7	200 x 75 x 20 x 3,0mm Cold formed lipped channel purlins (pre-punched)	Tonnes	6.68		
	DC 6.68				
8	200 x 100 x 20 x 3,0mm Cold formed lipped channel purlins (pre-punched)	Tonnes	13.32		
	DC 13.32				
<u>Hot dipped galvanised members</u>					
9	CHS 101.6 x 6.3mm Circular hollow section struts	Tonnes	0.35		
	DC 0.35				
10	CHS 152.4 x 6.0mm Circular hollow section struts	Tonnes	0.74		
	DC 0.74				
11	IPE 160 x 15,8 kg/m I-section rafter beams	Tonnes	7.69		
	DC 7.69				
12	IPE 200 x 22,4 kg/m I-section rafter beams	Tonnes	5.18		
	DC 0.35 SB 4.83				
13	60 x 60 x 8mm Angle section bracing	Tonnes	2.22		
	DC 1.85 SB 0.37				
14	80 x 80 x 8mm Angle section truss webbing	Tonnes	3.88		
	DC 3.88				
15	UB 305 x 102 x 25 kg/m Rafters	Tonnes	5.04		
	DC 5.04				
16	UB 356 x 171 x 51 kg/m Rafters	Tonnes	1.15		
	DC 1.15				
17	Plates, angles, cleats, brackets, connections, bolts (grade 8.8), washers, etc.	Tonnes	4.14		
	DC 3.16 SB 0.98				
<u>Hot dipped galvanised members in circular work</u>					
18	CHS 152.4 x 6.0mm Circular hollow section posts circular on elevation to 2583mm mean radius, as per engineers drawing number DC-ST-WD-2015 (section A-A)	Tonnes	0.56		
	DC 0.56				
19	IPE 160 x 15,8 kg/m I-section rafter beams circular on elevation to 1231mm mean radius, as per engineers drawing number DC-ST-WD-2015 (Section A-A)	Tonnes	0.49		
	DC 0.49				
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		Unit	Quantity	Rate	Amount
20	UB 305 x 102 x 25 kg/m Rafters circular on elevation to 2583mm mean radius, as per engineers drawing number DC-ST-WD-2015 (Section A-A)	Tonnes	1.61		
	DC 1.61				
	<u>Hot dipped galvanised holding down bolts, etc.</u>				
21	M24 x 720mm Long holding down bolt (grade 8.8 threaded bar) complete with two nuts and two washers	No	50		
	DC 50				
22	Drill or core 28mm hole in exact position into top of reinforced concrete slab for a depth of 570mm, remove all dust and water from hole by blowing out with high pressure air hose, and grout M24 holding down bolt into place using Hilti RE-100 Epoxy in strict accordance with product specifications	No	250		
	DC 200 SB 50				
	<u>Hot dipped galvanised walkways, etc.</u>				
23	4,5mm Vastap walkway plate 1000mm wide	m	20		
	DC 20				
	<u>CORROSION PROTECTION</u>				
	<u>Prepare surface to comply with paint manufacturers specifications and apply one coat primer and two liberal coats Flintkote 3 bituminous coating in strict accordance with the manufacturers instructions, on</u>				
24	Galvanised steel columns that are buried in the ground	m ²	25		
	DC 25				
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Amount

SECTION NO. 2

BUILDING WORKS

BILL NO. 10

STRUCTURAL STEELWORK

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Structural Steelwork

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BUILDING WORKS</u> <u>BILL NO. 11</u> <u>METALWORK</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials</u>				
<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>				
<u>Project particular specifications</u>				
<p>The specifications particular to this project are included in C3.2 Particular Specifications: Construction Works included in Envelope A Volume 1 of 2 of the tender documents. The Contractor is to take cognisance of them when pricing the relevant items in the Bill of Quantities as no extras arising out of their failure to do so will be entertained</p>				
<u>Descriptions of bolts, anchors, etc</u>				
<p>Descriptions of bolts shall be deemed to include nuts and washers</p>				
<p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p>				
<p>Metalwork described as holed for bolt(s) shall be deemed to exclude the bolts unless otherwise described</p>				
<p>Items described as plugged shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres</p>				
<u>Glazed aluminium works</u>				
<p>All aluminium glazed doors, windows, curtain walls and louvred doors and panels that are purpose / custom made are to be manufactured as per manufacturers specifications all in accordance with AAMSA, SAGA, NBR and SABS regulation</p>				
<p>Aluminium frames are not to be built in, but must be installed in openings prepared by the contractor</p>				
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	Unit	Quantity	Rate	Amount
<p>The contractor is to inform the aluminium manufacturer as to when the openings are ready for measurement. All dimensions are to be checked and verified on site prior to manufacture</p> <p>As far as possible, all glazed aluminium doors and windows are to be factory glazed and wrapped in protective plastic tape</p> <p>After installation the contractor is to take all necessary measures to protect the aluminium units from any on site damage, including scratched glass and mortar stained aluminium frames. Any and all damaged units are to be replaced at the contractors cost</p> <p>Curtain wall design is to be as per AGI sheerline design, endorsed by AGI solutions (Pty) Ltd</p> <p>All glazing to be in strict accordance with SAGA regulations and illustrate the appropriate mark to confirm type of glass used i.e. toughened glass</p> <p>Surfaces to receive powder coating are to be supplied by the manufacturer, complying with SANS 999:2013</p> <p><u>Ironmongery to aluminium louvre doors, sliding folding doors and shopfronts</u></p> <p>Ironmongery items in the descriptions below refer to the ironmongery schedules accompanying these bills of quantities, as prepared by Dormakaba, to be read in conjunction with these bills of quantities</p> <p>All cylinders and padlocks to be supplied under the commercial building master "GGMK" as per the key control schedule</p> <p>Sample labelling is to be provided of codes stamped on the cylinder and keys, for client approval</p> <p>All keys to be labelled / tagged separately and to include the door number, description and key number</p> <p>Three keys to be provided per cylinder</p> <p><u>SUNDRY GALVANISED STEELWORK</u></p> <p><u>Hot dipped galvanised corner protectors, bearers, etc.</u></p>				
1				
40 x 40 x 3mm Angle section framing with 30 x 5 x 100mm long fished tailed lugs welded on at 300mm centres including embedding in concrete (to generator floor ducts)				
	m	95		
SB 95				
2				
Extra over 40 x 40 x 3mm Angle section framing for mitred L-intersection (to generator floor ducts)				
	No	28		
SB 28				
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		Unit	Quantity	Rate	Amount
3	70 x 70 x 6mm Angle section threshold protector with 100mm long fish tailed lugs welded on at 500mm centres embedded in concrete surface bed (provisional)	m	102		
	DC 74 SB 28				
	<u>Purpose made galvanised (after final fabrication) door frames built into brickwork with lugs at suitable centres</u>				
4	Composite frame comprising 76 x 38 x 2mm rectangular tubing with and including 25 x 25 x 2mm angle iron welded on to form internal bead along full length for door recess, including 15.8mm diameter tube lugs	m	92		
	DC 36 SB 56				
	<u>ALUMINIUM TRANSFORMER ROOM DOORS AND FRAMES (CPAP WORK GROUP NO. 140)</u>				
	<u>Aluminium powder coated combination louvred doors hung to steel frames (steel frames elsewhere measured) as per appended door schedules, complete with ironmongery and fixing to brickwork, concrete or steel support members all in accordance with manufacturer's specification</u>				
5	Purpose made single door unit, 900 x 2400mm high complete with Trox or similar approved louvred infill panel to bottom half of door (ventilation strips to be dust and insect proof, complete with aluminium insert mesh fitted to inside face of door) and solid aluminium infill panel to top half of door, complete with ironmongery (refer to hardware set 21) comprising three suitable hinges (HBDMF), NE 3-6 parallel arm non hold open door closer (TS83 PA with parallel arm bracket), 149 x 19mm straight tubular pull handle (DPH301C BT), drop plate (TS83 drop plate), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), round cylinder escutcheon (DCE-002 SS), CISA anti thrust mortice nightlatch with holdback snib (55250 57 20), Union "trimec" AWR electric strike (TS101) with access control out (D-16 / 01,02,03)	No	3		
	DC 3				
Carried to Collection					R
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Metalwork					

		Unit	Quantity	Rate	Amount
6	Purpose made single door unit, 900 x 2400mm high complete with Trox or similar approved louvred infill panel to bottom half of door (ventilation strips to be dust and insect proof, complete with aluminium insert mesh fitted to inside face of door) and solid aluminium infill panel to top half of door, complete with ironmongery (refer to hardware set 14) comprising three suitable hinges (HBDMF), non hold open Cam action slide channel door closer (TS92B-SL), 400 x 30mm offset tubular pull handle BTB (DPH206BTB), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), round cylinder escutcheon (DCE-002 SS), CISA anti thrust mortice nightlatch with holdback snib (55250 57 20), Union "trimec" AWR electric strike (TS101) with access control out, floor mounted door stop (DDS-SS-017) (D-16 / 04)	No	1		
	SB 1				
7	Purpose made single door unit, 900 x 2400mm high complete with Trox or similar approved louvred infill panel to bottom half of door (ventilation strips to be dust and insect proof, complete with aluminium insert mesh fitted to inside face of door) and solid aluminium infill panel to top half of door, complete with ironmongery (refer to hardware set 12) comprising three suitable hinges (HBDMF), lever handle on rose with cylinder escutcheons (CR003 Cyl SS), cylinder sash lock (D036S SS), grand master keyed 65mm knob cylinder (CISA 0G302-10-12) (D-16 / 05)	No	1		
	SB 1				
8	Purpose made double door unit, 1575 x 2400mm high complete with Trox or similar approved louvred infill panel to bottom half of each door leaf (ventilation strips to be dust and insect proof, complete with aluminium insert mesh fitted to inside face of door) and solid aluminium infill panel to top half of each door leaf, complete with ironmongery (refer to hardware set 11) comprising three suitable hinges per door leaf (HBDMF), EN 3-6 parallel arm non hold open door closer (TS83 PA with parallel arm bracket), drop plate (TS83 drop plate), 149 x 19mm straight tubular pull handle (DPH301C BT), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), round cylinder escutcheon (DCE-002-SS), CISA anti thrust mortice nightlatch with holdback snib (55250 57 20), Union "trimec" AWR electric strike (TS101) with access control out, two Alufab 150mm aluminium flush bolts (M1519N), 600mm Alufab extension rod (H469), Halstead 200mm SC on brass cabin hook & eye with 100 x 100 x 75mm chamfered wrot meranti block (166) (D-17 / 01)	No	1		
	SB 1				
Carried to Collection				R	
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Metalwork					

		Unit	Quantity	Rate	Amount
9	Purpose made double door unit, 1575 x 2400mm high complete with Trox or similar approved louvred infill panel to bottom half of each door leaf (ventilation strips to be dust and insect proof, complete with aluminium insert mesh fitted to inside face of door) and solid aluminium infill panel to top half of each door leaf, complete with ironmongery (refer to hardware set 13) comprising three suitable hinges per door leaf (HBDMF), lever handle on rose with cylinder escatcheons (CR003 Cyl SS), cylinder sash lock (D036S SS), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), two Alufab 150mm aluminium flush bolts (M1519N) and 600mm Alufab extension rod (H469) (D-17 / 02,03,04)	No	3		
	DC 3				
10	Purpose made louvre unit, 3897 x 2400mm high comprising three full louvre panels 960 x 2400mm high and one single door unit 810 x 2360mm high with louvred infill panel to bottom half of door and solid infill panel to top half of door. All louvres to be Trox or similar approved (ventilation strips to be dust and insect proof, complete with aluminium insert mesh fitted to inside face), door complete with ironmongery (refer to hardware set 16) comprising three suitable hinges (HBDMF), NE 3-6 parallel arm non hold open door closer (TS83 PA with parallel arm bracket), drop plate (TS83 drop plate), 400 x 30mm offset tubular pull handle BTB (DPH206BTB), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), round cylinder escutcheon (DCE-002 SS), CISA anti thrust mortice nightlatch with holdback snib (55250 57 20), Union "trimec" AWR electric strike (TS101) with access control out (D-19)	No	2		
	SB 2				
11	Purpose made double door unit, 1800 x 2400mm high complete with Trox or similar approved louver infill panel to bottom half of each door leaf (ventilation strips to be dust and insect proof, complete with aluminium insert mesh fitted to inside face of door), and solid aluminium infill panel to top half of each door leaf, complete with ironmongery (refer to hardware set 15) comprising three suitable hinges per door leaf (HBDMF), NE 3-6 parallel arm non hold open door closer (TS83 PA with parallel arm bracket), drop plate (TS83 drop plate), 400 x 30mm offset tubular pull handle BTB (DPH206BTB), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), round cylinder escutcheon (DCE-002 SS), CISA anti thrust mortice nightlatch with holdback snib (55250 57 20), Alufab 150mm aluminium flush bolt (M1519N), 600mm Alufab extension rod (H469), Union "trimec" AWR electric strike (TS101) with access control out (D-20)	No	1		
	SB 1				
Carried to Collection				R	
Section No. 2					
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		Unit	Quantity	Rate	Amount
12	<p>Purpose made double door unit, 2400 x 2400mm high complete with Trox or similar approved louvred infill panel to bottom half of each door leaf (ventilation strips to be dust and insect proof, complete with aluminium insert mesh fitted to inside face of door) and solid aluminium infill panel to top half of each door leaf, complete with ironmongery (refer to hardware set 11) comprising three suitable hinges per door leaf (HBDMF), EN 3-6 parallel arm non hold open door closer (TS83 PA with parallel arm bracket), drop plate (TS83 drop plate) 149 x 19mm straight tubular pull handle (DPH301C BT), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), round cylinder escatcheon (DCE-002-SS), CISA anti thrust mortice nightlatch with holdback snib (55250 57 20), Union "trimec" AWR electric strike (TS101) with access control out, two Alufab 150mm aluminium flush bolts (M1519N), 600mm Alufab extension rod (H469), Halstead 200mm SC on brass cabin hook & eye with 100 x 100 x 75mm chamfered wrot meranti block (166) (D-21)</p> <p>SB 2</p> <p><u>ALUMINIUM WINDOWS, DOORS, ETC. (CPAP WORK GROUP NO. 149)</u></p> <p><u>Glazed aluminium powder coated casement windows as per appended window schedules, of Wispeco Casement 30.5 system, complete with subframes, ironmongery, glass, sealing, etc. and fixing to brickwork, concrete or steel support members all in accordance with manufacturer's specification</u></p>	No	2		
13	<p>Purpose made window unit 600 x 1830mm high overall, including one top hung casement sash 600 x 540mm high and one fixed pane 600 x 1260mm high, glazed in 6.38mm PG SmartGlass SolarShield S20 Gey laminated reflective coated safety glass (W01)</p> <p>DC 2</p>	No	2		
14	<p>Purpose made window unit 3430 x 680mm high overall, including two top hung casement sashes 638 x 680mm high and three fixed panes 638 x 680mm high, glazed in 6.38mm PG SmartGlass SolarShield S20 Gey laminated reflective coated safety glass (W02)</p> <p>DC 2</p>	No	2		
15	<p>Purpose made window unit 5500 x 605mm high overall, comprising nine fixed panes of equal size, glazed in 6.38mm PG SmartGlass SolarShield S20 Gey laminated reflective coated safety glass (W03)</p> <p>DC 6</p>	No	6		
Carried to Collection				R	
Section No. 2					
Bill No. 11					
Metalwork					

		Unit	Quantity	Rate	Amount
16	Purpose made window unit 600 x 900mm high overall, including one top hung casement sash 600 x 540mm high and one fixed pane 600 x 360mm high, glazed in 6.38mm PG SmartGlass SolarShield S20 Grey laminated reflective coated safety glass (W04)	No	5		
	GH 5				
	<u>ALUMINIUM SHOPFRONTS (CPAP WORK GROUP NO. 149)</u>				
	<u>Glazed aluminium powder coated shopfronts as per appended door schedules, of Sheerline CW60 Vistawall Curtain Wall system formed of closed frame sections complete with subframes, ironmongery, glass, sealing, etc. and fixing to brickwork, concrete or steel support members all in accordance with manufacturer's specification</u>				
17	Purpose made shopfront, 5470 x 2730mm high with one double door 1505 x 2050mm high, 5 x fan lights 600mm high, 4 x side lights 1000mm high and 4 x side lights 850 high, complete with ironmongery (refer to hardware set 01) comprising two 2100mm aluminium sinkless hinges (5050), NE 3-6 parallel arm non hold open door closer (TS83 PA with parallel arm bracket), drop plate (TS83 drop plate), two 400 x 30mm offset tubular pull handle BTB (DPH206BTB), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), round cylinder escatcheon (DCE-002 SS), two Alufab 150mm anodised aluminium flush bolts (M1519N), dust proof strike (DPS-SS-032), CISA anti thrust mortice nightlatch with holdback snib (55250 57 20), Union "trimec" AWR electric strike (TS101) with access control out, glazed in 6.38mm PG SmartGlass SolarShield S20 Grey laminated reflective coated safety glass (SF-01)	No	1		
	DC 1				
18	Purpose made shopfront, 1050 x 2730mm high with one top hung casement sash and two fixed panes of unequal size, glazed in 6.38mm PG SmartGlass SolarShield S20 Grey laminated reflective coated safety glass (SF-02)	No	4		
	DC 4				
19	Purpose made shopfront, 5597 x 2730mm high with four top hung casement sashes and fourteen fixed panes of unequal size, glazed in 6.38mm PG SmartGlass SolarShield S20 Grey laminated reflective coated safety glass (SF-03)	No	2		
	DC 2				
20	Purpose made shopfront, 1115 x 2730mm high with three fixed panes of unequal size, glazed in 6.38mm PG SmartGlass SolarShield S20 Grey laminated reflective coated safety glass (SF-04)	No	1		
	DC 1				
	Carried to Collection			R	
	Section No. 2				
	Bill No. 11				
	Metalwork				

		Unit	Quantity	Rate	Amount
21	Purpose made shopfront, 4655 x 2730mm high with three top hung casement sashes and fifteen fixed panes of unequal size, glazed in 6.38mm PG SmartGlass SolarShield S20 Grey laminated reflective coated safety glass (SF-05)	No	1		
	DC 1				
22	Purpose made shopfront, 3000 x 1000mm high with two sliding panes and two fixed panes of unequal size, glazed in 6.38mm Clear standard strength laminated safety glass (SF-06)	No	3		
	DC 3				
23	Purpose made shopfront, 1800 x 1000mm high with two fixed panes of equal size, glazed in Clear Low E double glazing safety glass (SF-08)	No	6		
	DC 6				
24	Purpose made shopfront, 2723 wide (extreme) x 3207mm high (extreme) with one single door 812 x 2081mm high, 3 x fan lights average 887mm high, 1 x side light 850mm high and one top hung casement sash 882 x 850mm high, complete with ironmongery (refer to hardware set 29) comprising 2100mm aluminium sinkless hinges (5050), NE 3-6 parallel arm non hold open door closer (TS83 PA with parallel arm bracket), 400 x 30mm offset tubular pull handle BTB (DPH206BTB), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), round cylinder escatcheon (DCE-002 SS), CISA anti thrust mortice nightlatch with holdback snib (55250 57 20), Union "trimec" AWR electric strike (TS101) with access control out, glazed in 6.38mm PG SmartGlass SolarShield S20 Grey laminated reflective coated safety glass (SF-12)	No	1		
	SB 1				
25	Purpose made shopfront, 2623 x 2020mm high with four fixed panes of unequal size, glazed in 6.38mm PG SmartGlass SolarShield S20 Grey laminated reflective coated safety glass (SF-13)	No	1		
	GH 1				
Carried to Collection				R	
Section No. 2					
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Metalwork					

		Unit	Quantity	Rate	Amount
26	<p>Purpose made shopfront, 2772 wide (extreme) x 3207mm high (extreme) with one single door 812 x 2081mm high, 3 x fan lights average 887mm high, 1 x side light 850mm high and one top hung casement sash 882 x 850mm high, complete with ironmongery (refer to hardware set 29) comprising 2100mm aluminium sinkless hinges (5050), NE 3-6 parallel arm non hold open door closer (TS83 PA with parallel arm bracket) 400 x 30mm offset tubular pull handle BTB (DPH206BTB), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), round cylinder escatcheon (DCE-002 SS), CISA anti thrust mortice nightlatch with holdback snib (55250 57 20), Union "trimec" AWR electric strike (TS101) with access control out, glazed in 6.38mm PG SmartGlass SolarShield S20 Grey laminated reflective coated safety glass (SF-14)</p> <p>GH 1</p> <p><u>Glazed aluminium powder coated shopfronts as per appended door schedules, of Clip 44 system formed of closed frame sections complete with sub frames, ironmongery, glass, sealing, etc. and fixing to brickwork, concrete or steel support members all in accordance with manufacturer's specification</u></p>	No	1		
27	<p>Purpose made shopfront, 1760 x 2730mm high with one single door 820 x 2050mm high, 2 x fan lights 600mm high and 1 x side light 2050mm high, complete with ironmongery (refer to hardware set 26) comprising three Alufab 200mm sinkless hinges (2040), non hold open Cam action slide channel door closer (TS92B-SL), 400 x 30mm offset tubular pull handle BTB (DPH206BTB), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), round cylinder escatcheon (DCE-002 SS), CISA anti thrust mortice nightlatch with holdback snib (55250 57 20), Union "trimec" AWR electric strike (TS101) with access control out, wall buffer (DDH-SS-020), glazed in 6.38mm Opaque standard strength laminated safety glass (SF-07)</p> <p>DC 1</p>	No	1		
28	<p>Purpose made shopfront, 900 x 2730mm high with two fixed panes of unequal size, glazed in 6.38mm Opaque standard strength laminated safety glass (SF-09)</p> <p>DC 1</p>	No	1		
Carried to Collection					R
Section No. 2					
Bill No. 11					
Metalwork					

		Unit	Quantity	Rate	Amount
29	Purpose made shopfront, 2400 x 2730mm high with one single door 820 x 2050mm high, 3 x fan lights 600mm high and 2 x side light 1000mm high and 2 x side lights 850mm high, complete with ironmongery (refer to hardware set 22) comprising three Alufab 200mm sinkless hinges (2040), non hold open Cam action slide channel door closer (TS92B-SL), 400 x 30mm offset tubular pull handle BTB (DPH206BTB), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), round cylinder escatcheon (DCE-002 SS), CISA anti thrust mortice nightlatch with holdback snib (55250 57 20), Union "trimec" AWR electric strike (TS101) with access control out, floor mounted door stop (DDS-SS-017), glazed in 6.38mm Clear standard strength laminated safety glass (SF-10 and SF-11)	No	3		
	DC 3				
30	Purpose made single door with fanlight, 900 x 2730mm high with one single door 820 x 2060mm high and 1 x fan light 670mm high, complete with ironmongery (refer to hardware set 25) comprising three Alufab 200mm sinkless hinges (2040), lever handle on rose with cylinder escatcheons (CR003 Cyl SS), cylinder sash lock (D036S SS), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), floor mounted door stop (DDS-SS-017), glazed in 6.38mm Clear standard strength laminated safety glass (D-07)	No	1		
	DC 1				
31	Purpose made shopfront, 1575 x 2730mm high with one double door 1495 x 2060mm high, 1 x fan light 670mm high, complete with ironmongery (refer to hardware set 18) comprising two 2100mm aluminium sinkless hinges (5050), non hold open Cam action slide channel door closer (TS92B-SL), two 400 x 30mm offset tubular pull handle BTB (DPH206BTB), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), round cylinder escatcheon (DCE-002 SS), two Alufab 150mm anodised aluminium flush bolts (M1519N), 600mm Alufab extension rod (H469), dust proof strike (DPS-SS-032), CISA anti thrust mortice nightlatch with holdback snib (55250 57 20), floor mounted door stop (DDS-SS-017), glazed in 6.38mm Clear standard strength laminated safety glass (D-08)	No	5		
	DC 5				
Carried to Collection					R
Section No. 2					
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Metalwork					

		Unit	Quantity	Rate	Amount
32	<p>Purpose made single door, 900 x 2100mm high, complete with ironmongery (refer to hardware set 27) comprising three Alufab 200mm sinkless hinges (2040), lever handle on rose with cylinder escatcheons (CR003 Cyl SS), cylinder sash lock (D036S SS), grand master keyed 65mm knob cylinder (CISA 0G302-10-12), wall buffer (DDH-SS-020), glazed in 6.38mm Clear standard strength laminated safety glass (D-09)</p> <p>DC 3</p> <p><u>ALUMINIUM SLIDING FOLDING DOORS (CPAP WORK GROUP NO. 149)</u></p> <p><u>Glazed aluminium powder coated sliding folding doors as per appended door schedules of Clip 44 system formed of closed frame sections complete with sub frames, ironmongery, glass, sealing, etc and fixing to brickwork, concrete or steel support members all in accordance with manufacturer's specification</u></p>	No	3		
33	<p>Purpose made sliding folding (stacking) door, 2270 x 2400mm high overall in three 730 x 2350mm high leaves, complete with ironmongery (refer hardware set 09) comprising ISEO 35mm backset roller bolt lock with deadlock and profile cylinder piecing, grand master keyed 42,5mm half cylinder (CISA 0G304-09-12), narrow stile cylinder escatcheon (DCE-105 SS), glazed in 6.38mm Clear standard strength laminated safety glass (D-04)</p> <p>DC 2</p> <p><u>NATURAL ANODISED HORIZONTAL ALUMINIUM LOUVRE UNITS (CPAP WORK GROUP NO. 140)</u></p> <p><u>Fixed louvre units fixed to brickwork or concrete</u></p>	No	2		
34	<p>Purpose made louvre unit of aluminium frame with aluminium louvers to match, for 600 x 600mm high opening (L-01)</p> <p>DC 4</p> <p><u>SPECIALIST BURGLAR BARS</u></p> <p><u>InvisiBars transparent security window barrier fixed to aluminium window frames</u></p>	No	4		
35	<p>6 x 30mm Clear polycarbonate burglar bar 1050mm long fixed in two places directly into aluminium frame over opening section with stainless steel pop rivets and polyethylene cover caps</p> <p>DC 16</p>	No	16		
Carried to Collection					R
Section No. 2					
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Metalwork					

		Unit	Quantity	Rate	Amount
36	6 x 30mm Clear polycarbonate burglar bar 950mm long fixed in two places directly into aluminium frame over opening section with stainless steel pop rivets and polyethylene cover caps	No	44		
	DC 32 SB 6 GH 6				
37	6 x 30mm Clear polycarbonate burglar bar 850mm long fixed in two places directly into aluminium frame over opening section with stainless steel pop rivets and polyethylene cover caps	No	12		
	DC 12				
38	6 x 30mm Clear polycarbonate burglar bar 720mm long fixed in two places directly into aluminium frame over opening section with stainless steel pop rivets and polyethylene cover caps	No	16		
	DC 16				
39	6 x 30mm Clear polycarbonate burglar bar 600mm long fixed in two places directly into aluminium frame over opening section with stainless steel pop rivets and polyethylene cover caps	No	28		
	DC 8 GH 20				
	<u>STEEL ROLLER SHUTTERS ETC</u>				
	<u>Xpanda galvanised steel powder coated roller shutters as per appended door schedules, with 0.8 x 76mm interlocked slats (18kg/m²) with nylon endlocks, aluminium T-bar with neoprene strip, side guides, canopy cover, etc. fixed to brickwork, concrete or steel support members all in accordance with manufacturer's specification</u>				
40	Electrically operated motorized slatted roller shutter with chain manual override for 2400 x 2400mm high opening, with 75mm side guides, 450mm square dust canopy cover and 5 No Fenestra / Vision laths with clear polycarbonate inserts behind, operated with and including Somfy SC300/12 3-phase heavy duty motor, electrical connection and commissioning (electrical isolator elsewhere)	No	9		
	DC 9				
41	Chain operated slatted roller shutter for 2000 x 1500mm high opening, with 75mm side guides, 450mm square dust canopy cover and 5 No Fenestra / Vision laths with clear polycarbonate inserts behind	No	1		
	DC 1				
	<u>GALVANISED HANDRAILS, BALUSTRADES, ETC.</u>				
	<u>Mentis Africa or equally approved balustrades</u>				
	Refer to drawing number DC-WD-AR-1502 (Rev 0), appended to these bills of quantities				
	Carried to Collection				
	Section No. 2				
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	Metalwork				

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		Unit	Quantity	Rate	Amount
42	Inter-link pre-galvanised mild steel ball & tube type horizontal balustrading 1000mm high of 30mm Ø tubular continuous top and bottom rails and 40mm Ø tubular stanchion posts at centres shown on architects details (approximately 1000mm centres) set into concrete in 65mm deep coredrilled sleeve with Sika Dura-AP Epoxy paste adhesive and with 80mm Ø x 3mm floor flange post surround	m	35		
	DC 4 SB 31				
43	Inter-link pre-galvanised mild steel ball & tube type raking balustrading 1000mm high of 30mm Ø tubular continuous top and bottom rails and 40mm Ø tubular stanchion posts at centres shown on architects details (approximately 1000mm centres) set into concrete in 65mm deep coredrilled sleeve with Sika Dura-AP Epoxy paste adhesive and with 80mm Ø x 3mm floor flange post surround	m	45		
	DC 45				
44	Extra over balustrade system for 90 degree junction (corner) between horizontal or raking balustrade sections	No	7		
	DC 6 SB 1				
45	Extra over balustrade system for 180 degree return ("horseshoe") between horizontal or raking balustrade sections	No	2		
	DC 2				
46	Extra over balustrade system for rounded end closure to horizontal or raking balustrade	No	10		
	DC 4 SB 6				
	<u>STAINLESS STEEL HANDRAILS, BALUSTRADES, ETC.</u>				
	<u>Purpose made stainless steel (Grade 316 steel) external hand rails</u>				
	Refer to drawing number DC-WD-AR-1503 (Rev 0), appended to these bills of quantities				
47	Hand rail of 50mm Ø x 3mm tubular continuous rail with 12mm Ø round fixing bars at centres shown on architects details (approximately 800mm centres) set into wall in 65mm deep coredrilled sleeve with chemical fixing adhesive and with 50mm Ø x 3mm flange surround	m	5		
	DC 5				
48	Extra over hand rail system for closure end piece	No	4		
	DC 4				
	Carried to Collection				
	Section No. 2				
	Bill No. 11				
	Metalwork				

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	Unit	Quantity	Rate	Amount
<u>Purpose made stainless steel (Grade 316 steel)</u> <u>welded external balustrades</u> Refer to drawing number DC-WD-AR-1503 (Rev 0), appended to these bills of quantities				
49				
Horizontal balustrades 1000mm high of 50mm Ø x 2mm continuous top rail and eight x 16mm Ø x 1mm horizontal rails, with top rail fitted to 50mm Ø x 2mm balusters at centres shown on architects details (approximately 1000mm centres) with 16mm Ø x 1mm round connector bar 50mm long and horizontal rails fitted to each baluster with crossbar holders. Balusters closed on each end with 50mm Ø x 3mm pipe end closures and lower end set into concrete in 65mm deep coredrilled sleeve with Sika Dura-AP Epoxy paste adhesive and with 80mm Ø x 3mm floor flange post surround				
	m	20		
DC 20				
50				
Raking balustrades 1000mm high of 50mm Ø x 2mm continuous top rail and eight x 16mm Ø x 1mm horizontal rails, with top rail fitted to 50mm Ø x 2mm balusters at centres shown on architects details (approximately 1000mm centres) with 16mm Ø x 1mm round connector bar 50mm long and horizontal rails fitted to each baluster with crossbar holders. Balusters closed on each end with 50mm Ø x 3mm pipe end closures and lower end set into concrete in 65mm deep coredrilled sleeve with Sika Dura-AP Epoxy paste adhesive and with 80mm Ø x 3mm floor flange post surround				
	m	40		
DC 40				
51				
Extra over balustrade system for 90 degree junction (corner) between horizontal or raking balustrade sections				
	No	5		
DC 5				
52				
Extra over top rail for 50mm Ø x 3mm thick end fixing lug secured to wall with M8x75mm Rawl bolt				
	No	3		
DC 3				
53				
Extra over top rail for splay cut and 50mm Ø x 3mm pipe end closure				
	No	5		
DC 5				
54				
Extra over top rail for downturn end and 50mm Ø x 3mm pipe end closure				
	No	4		
DC 4				
Carried to Collection			R	
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	Unit	Quantity	Rate	Amount
<u>GALVANISED STEEL GATES, SCREENS, ETC</u>				
<u>Purpose made hot dip galvanised after fabrication mild steel framed and welded cage, including all welding, cutting, drilling and grinding smooth</u>				
Refer to drawing number DC-WD-AR-1507 (Rev 0), appended to these bills of quantities				
55				
Screen cage 8400 x 4290mm high of 75 x 50 x 3mm hollow section top rail, bottom rail and vertical rails (3 No), filled in with 50 x 50 x 3mm weldmesh screening fixed between members to 25 x 25 x 3mm thick angle with 25 x 3mm thick flat bar bolted with 8mm bolts at 400mm centres				
	No	1		
SB 1				
<u>Purpose made hot dip galvanised after fabrication mild steel framed and welded main entrance gates, including all welding, cutting, drilling and grinding smooth</u>				
Refer to drawing number DC-WD-AR-1504 (Rev 0) and DC-WD-AR-1505 (Rev 0), appended to these bills of quantities				
56				
Sliding gate 8800 x 2320mm high of 100 x 75 x 3mm hollow section top rail and vertical rails (5 No), 100 x 150 x 3mm thick hollow section bottom rail and 50 x 50 x 3mm thick hollow section horizontal middle rail, filled in with 50 x 50 x 3mm weldmesh screening fixed between members to 30 x 30 x 3mm thick angle with 25 x 3mm thick flat bar bolted with 8mm bolts at 400mm centres. Gate complete with 200mm diameter steel wheels (2 No) with bearings running on and including 14 800mm long x 22kg/m steel rail on sleepers cast into concrete (concrete elsewhere measured)				
	No	1		
DC 1				
57				
152 x 152 x 6mm I-beam post and keep to detail, overall 2620mm high (5500mm girth), cast into concrete base (concrete elsewhere measured)				
	No	1		
DC 1				
58				
152 x 152 x 6mm I-beam post and roller assembly, overall 2620mm high (5500mm girth), cast into concrete base (concrete elsewhere measured) including angle with adjustable slot and fixing plate with pair of 45mm diameter nylon sliding gate roller guides				
	No	2		
DC 2				
Carried to Collection				
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		Unit	Quantity	Rate	Amount
	<u>Purpose made hot dip galvanised after fabrication mild steel framed and welded refuse gates, including all welding, cutting, drilling and grinding smooth</u>				
	Refer to drawing number DC-WD-AR-1500 (Rev 0) and DC-WD-AR-1500B (Rev 0), appended to these bills of quantities				
59	Double swing gate overall size 6000 x 2100mm high, each leaf of 75 x 50 x 3mm hollow section top and bottom rails, 75 x 50 x 3mm hollow section side rails and 50 x 50 x 3mm vertical middle rail, filled in with 50 x 50 x 3mm weldmesh screening fixed between members to 25 x 25 x 3mm thick angle with 25 x 3mm thick flat bar bolted with 8mm bolts at 400mm centres. Each gate leaf complete with 245 x 10mm Ø barrel bolt slotted into 175mm long x 10mm (ID) round hollow tube, 25 x 10 x 5mm bolt rest, 100 x 75 x 3mm padlock plate with 15mm Ø hole, hung on 2 x M10 Ø bolts 150mm long secured with 50mm x 20mm flat bar to 100 x 150 x 8mm hinge plate secured to post (elsewhere measured) with M8 SS countersunk self tapping screws	No	1		
	DC 1				
60	100 x 100mm x 3mm Hollow section post 2400mm long, bolted between concrete floor and concrete beam over, including suitable fixing flanges	No	2		
	DC 2				
61	100 x 200 x 5mm Barrel docking plate cast into concrete with 2No. 100 x 10 x 2mm lugs and with 2 x holes drilled through plate to receive barrel bolts	No	1		
	DC 1				
	<u>GLASS FIBRE (CPAP Work Group No 136)</u>				
	<u>Floor duct covers</u>				
62	38mm Deep 'Vitaglass' FRP polyester IFR-25 grating rectangular duct covers laid loose in frames (frames elsewhere) in suitable lengths to suit service ducts approximately 900mm wide	m	40		
	SB 40				
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	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BUILDING WORKS</u> <u>BILL NO. 12</u> <u>PLASTERING</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials</u>				
<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>				
<u>Project particular specifications</u>				
<p>The specifications particular to this project are included in C3.2 Particular Specifications: Construction Works included in Envelope A Volume 1 of 2 of the tender documents. The Contractor is to take cognisance of them when pricing the relevant items in the Bill of Quantities as no extras arising out of their failure to do so will be entertained</p>				
<u>Preparation of surfaces to receive screeds, plaster, etc.</u>				
<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>				
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	Unit	Quantity	Rate	Amount
<p>Bonded granolithic shall be applied to the slab after applying a 1:1 sand-and-cement slurry brushed over the surface and allowed to partially set before applying the granolithic. The granolithic shall be thoroughly compacted and lightly wood floated to the required levels</p> <p>After wood floating, the monolithic and bonded granolithic shall remain undisturbed until bleeding has ceased and the surface has stiffened. Any remaining bleed water and laitance shall then be removed and the surface steel trowelled or power floated</p> <p><u>Curing, seasoning and protection</u></p> <p>Granolithic shall be covered with clean hessian with waterproof building foil over and kept wet for at least seven days after laying</p> <p><u>Colour</u></p> <p>Coloured granolithic shall be tinted with an approved colouring pigment mixed into the granolithic of uniform appearance and consistent colour throughout</p> <p><u>SCREEDS</u></p> <p><u>Cement screeds on concrete</u></p>				
1	30mm Thick on floors and landings	m ²	240	
	DC 240			
<u>GRANOLITHIC</u>				
<u>Untinted granolithic, on concrete</u>				
2	30mm Thick on floors and landings	m ²	26	
	DC 26			
3	30mm Thick on narrow widths	m ²	4	
	SB 4			
4	Set of stopped raised reedings 100mm wide	m	7	
	SB 7			
<u>INTERNAL PLASTER</u>				
<u>One coat (4:1) cement plaster steel trowel floated, on brickwork and/or concrete</u>				
5	On walls	m ²	3 252	
	DC 2717 SB 487 GH 48			
6	On projecting and isolated columns	m ²	20	
	DC 20			
7	Concrete ceilings	m ²	25	
	DC 25			
8	Concrete beams	m ²	89	
	DC 58 SB 26 GH 5			
Carried to Collection				R
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Plastering				

		Unit	Quantity	Rate	Amount
9	On narrow widths DC 77 SB 12 GH 5 EXTERNAL PLASTER <u>One coat (4:1) cement plaster steel trowel floated, on brickwork and/or concrete</u>	m ²	94		
10	On walls DC 1045 SB 303 GH 38	m ²	1 386		
11	Concrete beams DC 58 SB 26 GH 5	m ²	89		
12	On narrow widths DC 42 SB 10 GH 5 CORNER PROTECTORS, DIVIDING STRIPS, ETC <u>Corner protectors, dividing strips, etc.</u>	m ²	57		
13	3 x 57mm Flat section brass dividing strips between different floor finishes at external doors (Provisional) DC 22 SB 9	m	31		
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	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BUILDING WORKS</u> <u>BILL NO. 13</u> <u>TILING</u> <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> <u>SUPPLEMENTARY PREAMBLES</u> <u>Proprietary items or materials</u> <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> <u>Project particular specifications</u> <p>The specifications particular to this project are included in C3.2 Particular Specifications: Construction Works included in Envelope A Volume 1 of 2 of the tender documents. The Contractor is to take cognisance of them when pricing the relevant items in the Bill of Quantities as no extras arising out of their failure to do so will be entertained</p> <u>Fixing</u> <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>				
Carried to Collection			R	
Section No. 2 Bill No. 13 Tiling				

		Unit	Quantity	Rate	Amount
<u>WALL TILING</u>					
<u>Allow the PC Amount of R550.00 / m2 (five hundred and fifty rand per square meter) (excluding VAT) for the supply and delivery of 600 x 600mm porcelain wall tiles, fixed with Tal Goldstar 12 adhesive mixed with Tal Bond in lieu of water on plastered walls (plaster elsewhere measured) with 3mm spacings and grouted with Tal grout, all to manufacturers specifications</u>					
Note: The contractor is to allow for, waste, profit, labour for fixing tiles and all adhesive and grouting (the rate will be adjusted for material costs only, when the Client selects the wall tile)					
1	On walls	m ²	120		
	DC 104 GH 16				
2	On external walls (provisional)	m ²	50		
	DC 50				
3	On walls in isolated panels, splashbacks, etc not exceeding 1m	m ²	6		
	DC 3 GH 3				
4	On narrow widths	m ²	4		
	DC 3 GH 1				
5	Fair exposed cutting and fitting around pipe not exceeding 100mm internal diameter (provisional)	No	14		
	DC 14				
6	Fair exposed cutting and fitting around pipe not exceeding 200mm internal diameter (provisional)	No	4		
	DC 4				
<u>Allow the PC Amount of R950.00 / m2 (Nine hundred and fifty rand per square meter) (excluding VAT) for the supply and delivery of mosaic type wall tiles, fixed with Tal Goldstar 12 adhesive mixed with Tal Bond in lieu of water on plastered walls (plaster elsewhere measured) with 3mm spacings and grouted with Tal grout, all to manufacturers specifications</u>					
7	On walls	m ²	10		
	DC 10				
Carried to Collection					R
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Bill No. 13					
Tiling					

		Unit	Quantity	Rate	Amount
<u>FLOOR TILING</u>					
<u>Allow the PC Amount of R550.00 / m2 (five hundred and fifty rand per square meter) (excluding VAT) for the supply and delivery of full body porcelain floor tiles, fixed with Tal Goldstar 12 adhesive mixed with Tal Bond in lieu of water on screeded concrete floors (screed elsewhere measured) and pointing with Tal tinted epoxy grout with continuous joints in both directions, all to manufacturers specifications</u>					
Note: The contractor is to allow for waste, profit, labour of fixing tiles and all adhesive and grouting (the rate will be adjusted for material costs only, when the Client selects the floor tile)					
8	On floors and landings	m ²	93		
	DC 80 GH 13				
9	On floors to falls	m ²	40		
	DC 40				
10	On narrow widths	m ²	7		
	DC 6 GH 1				
11	On thresholds 280mm wide of cut tiles laid sloping	m	5		
	DC 3 GH 2				
12	On risers 175mm high of cut tiles	m	32		
	DC 32				
13	On treads 280mm high of cut tiles	m	27		
	DC 27				
14	On raking and stepped outer edges of stairs 300mm wide extreme	m	2		
	DC 2				
15	Skirting 150mm high of cut skirting tiles	m	115		
	DC 95 SB -1 GH 21				
16	Skirting 150mm high of cut skirting tiles stepped over treads and risers	m	15		
	DC 15				
<u>SUNDRIES</u>					
<u>M Trim or equally approved</u>					
17	M Trim or equally approved stainless steel (grade 304) tile trim as Kirk Marketing SSE120	m	236		
	DC 213 GH 23				
18	M Trim stainless steel (grade 304) tile square edge trim as Kirk Marketing SQE120 (used as stair nosing)	m	37		
	DC 35 GH 2				
19	M Trim stainless steel (grade 304) movement joint with grey insert as Kirk Marketing SMJ120 (provisional)	m	33		
	DC 33				
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	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BUILDING WORKS</u> <u>BILL NO. 14</u> <u>PLUMBING AND DRAINAGE</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials</u>				
<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 and Engineer</p>				
<u>Project particular specifications</u>				
<p>The specifications particular to this project are included in C3.2 Particular Specifications: Construction Works included in Envelope A Volume 1 of 2 of the tender documents. The Contractor is to take cognisance of them when pricing the relevant items in the Bill of Quantities as no extras arising out of their failure to do so will be entertained</p>				
<u>Wire gratings</u>				
<p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings</p>				
<u>Exposed concrete surfaces</u>				
<p>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>				
<u>Stainless steel basins, sinks, wash troughs, urinals, etc.</u>				
<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>				
Carried to Collection			R	
Section No. 2 Bill No. 14 Plumbing And Drainage				

	Unit	Quantity	Rate	Amount
<u>Sealing of edges</u>				
Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone				
<u>Waste unions</u>				
Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings				
<u>Flush pans</u>				
Flush pans shall have straight or side outlets and 'P' or 'S' traps as necessary				
<u>PVC-U pipes and fittings</u>				
Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings				
Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings				
<u>uPVC pressure pipes and fittings</u>				
Pipes for water supply 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				
<u>'Polycop' polypropylene pipes</u>				
All pipe diameters are nominal external				
Polypropylene pipes 54mm diameter and smaller 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				
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				
Carried to Collection			R	
Section No. 2				
Bill No. 14				
Plumbing And Drainage				

	Unit	Quantity	Rate	Amount
<u>Copper pipes</u>				
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				
Copper pipes are to be installed in accordance with the latest revision of the Code of Practice for Copper Plumbing soldering techniques. Flux, solder, etc to be strictly in accordance with the manufacturer's requirements with special attention to copper flux composition				
<u>Reducing fittings</u>				
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				
<u>Fixing</u>				
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				
Descriptions of wall mounted, floor standing, drop-in, etc type sanitary fittings shall be deemed to include fixing in position and all fixing accessories				
Descriptions of proprietary items shall include fixing in position and all fixing accessories as specified by the manufacturer				
<u>Chasing</u>				
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				
Carried to Collection			R	
Section No. 2				
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Plumbing And Drainage				

	Unit	Quantity	Rate	Amount
<u>Wrapping to pipes</u>				
Pipes chased into brickwork must be wrapped with anti-corrosion tape as manufactured by Denso SA (Pty) Ltd. Rates are to include for wrapping around joints and fittings				
<u>'Densyl' petrolatum anti-corrosion tape as manufactured by Denso SA (Pty) Ltd</u>				
Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied with minimum 15mm lap per spiral unless otherwise described				
Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions including all mastic, tape, 'Layflat' sheeting, securing of same, etc				
Prices for wrapping of pipes shall include for all work as described to couplings in the length				
<u>Laying, backfilling, bedding, etc of pipes</u>				
Pipes shall be laid and bedded in accordance with manufacturer's instructions and trenches shall be carefully backfilled				
Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: 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)				
Unless otherwise described bedding of rigid pipes shall be class B bedding				
<u>Excavations</u>				
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'				
<u>General</u>				
All screw and bolt fixings for sanitaryware are to be stainless steel or chromium plate on brass				
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.				
Carried to Collection			R	
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Plumbing And Drainage				

		Unit	Quantity	Rate	Amount
<u>As-built drawings</u>					
Where required, the contractor shall prepare an updated set of as-built drawings.					
At completion of the contract the contractor shall hand these drawings to the principal agent for reproducing onto the originals for handing over to the employer (provision for allowance of as-built drawings elsewhere)					
<u>RAINWATER DISPOSAL (CPAP Work Group No 148)</u>					
<u>Seamless aluminium industrial gutter installations of pre-painted double coated Polymer Silicon baked colour Charcoal Grey enamel finish</u>					
1	100 x 200mm Industrial box gutter 580mm girth, four times bent along girth, of guage 0,9mm with matching splash plate, fixed to falls on and including 20 x 3mm dual purpose aluminium hanger brackets spaced not exceeding 600mm centres using aluminium peeled rivets, fixed to steel roof members	m	166		
	DC 135 SB 27 GH 4				
2	Extra over eaves gutter for stopped end crimped and sealed on the inside with Dow Coring 813 silicone sealer	No	16		
	DC 10 SB 4 GH 2				
3	Extra over eaves gutter for outlet for 100 x 100mm pipe and sealed on the inside with Dow Coring 813 silicone sealer	No	22		
	DC 16 SB 4 GH 2				
4	100 x 100mm Industrial rainwater pipe of guage 0,6mm, fixed to wall with straps spaced not exceeding 1500mm centres using nail plugs	m	114		
	DC 83 SB 22 GH 9				
5	Extra over 100 x 100 x 0,6mm guage rainwater pipe for shoe, riveted and sealed	No	21		
	DC 15 SB 4 GH 2				
6	Extra over 100 x 100 x 0,6mm guage rainwater pipe for eaves or plinth offset, riveted and sealed	No	22		
	DC 16 SB 4 GH 2				
7	Spreader 1000mm long for 100 x 100mm pipe with half closed ends and holes at suitable centres, riveted and sealed	No	1		
	DC 1				
Carried to Collection					R
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		Unit	Quantity	Rate	Amount
<u>STORMWATER CHANNELS (CPAP WORK GROUP NO. 146)</u>					
<u>In-situ mesh reinforced (Ref 245) 25 Mpa concrete open stormwater channels with V-shaped waterway formed in top, finished smooth on all exposed surfaces and with angles rounded, cast in suitable lengths (not exceeding 1500mm), including all formwork, moulds, shallow excavation, filling and ramming, laying to falls, bedding and pointing in (3:1) cement mortar</u>					
8	750mm Wide x 150mm thick channels with 650 x 100mm deep segmental channel with and including 100mm x average 100mm high upstand on both sides along full length (abutting paved apron or natural ground)	m	50		
	SB 50				
9	Extra over for angles, intersections, ends, dressing into sides of catchpits, etc.	No	6		
	SB 6				
<u>SANITARY FITTINGS (CPAP Work Group No 148)</u>					
<u>'Vaal Sanitaryware' vitreous china wash hand basins</u>					
10	450 x 350mm Wash hand basin as "Vaal Midi Weaver CWEBIJ41-2C00400 / 706601 WH", fixed with and including "Cobra basin fixing bolt set MZ005670 / 8448Z000"	No	5		
	DC 4 GH 1				
<u>'Vaal Sanitaryware' vitreous china WC suites</u>					
11	Close couple WC suite comprising pan, approved double flap seat and lid, matching cistern with pushbutton top dual flush back inlet etc as "Vaal Eco Urban Compact CURCNOTF-2CO0373 / 772562WH"	No	1		
	GH 1				
12	Paraplegic WC suite comprising pan, approved double flap seat and lid, matching cistern with side flush valve, flush pipe, etc as "Vaal Pear Paraplegic SCC suite CPEPSSSU2COB / 7300SCWH"	No	1		
	DC 1				
13	Wall hung WC suite comprising pan with approved double flap seat and lid (cistern elsewhere measured) fitted on and including wall bracket bolted to brick wall, as "Vaal Urban Life Pan CURB50WH-2CO0377 / 439400WH"	No	3		
	DC 3				
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		Unit	Quantity	Rate	Amount
	<u>'Grohe' cisterns</u>				
14	Grohe uniset concealed cistern (Code G-38643001 / CTP38643001-Z) for wall hung WC pan (WC pan elsewhere measured) including inlet/outlet connector and Grohe Skat Cosmo dual flush actuator plate (Code G-3873200 / CTP3873200-Z)	No	3		
	DC 3				
	<u>'Franke Quinline' stainless steel domestic inset sinks</u>				
15	'Frankie Quinline' QLX611-120 Single end bowl inset sink (Code 1990003) and drainer unit, size 900 x 500mm overall with one bowl 410 x 343 x 167mm, including one 90mm basket waste outlet (Code 1120021), built into worktop (worktop elsewhere measured)	No	2		
	DC 1 GH 1				
	<u>WASTE UNIONS ETC (CPAP Work Group No 148)</u>				
	<u>'Cobra Watertech' waste unions etc.</u>				
16	32mm Slotted chrome plated basin clicker waste union (Code FWACB501-OGT0153 / 302-32)	No	5		
	DC 4 GH 1				
17	40mm Unslotted chrome plated bath or sink waste union (Code 316)	No	2		
	DC 1 GH 1				
	<u>TRAPS ETC (CPAP Work Group No 148)</u>				
	<u>'Cobra Watertech' traps etc.</u>				
18	'Cobra 385' Chromium plated deep seal bottle trap (Code FBTRP19-OGT0154 / 385 / 35SQ)	No	5		
	DC 4 GH 1				
19	32 x 32mm Chromium plated deep seal bottle trap with MI outlet (Code 340)	No	2		
	DC 1 GH 1				
	<u>TAPS, VALVES, ETC (CPAP Work Group No 148)</u>				
	<u>'Cobra Watertech' angle regulating valves</u>				
20	15mm Chromium plated angle regulating valve with 350mm flexi tube as Cobra 832/350F including joints to pipes	No	14		
	DC 10 GH 4				
	<u>'Cobra Watertech' mixers</u>				
21	'Cobra Focus' Chromium plated single-hole basin mixer (Code: FBN1D1F1-OGT0122 / FC-951G)	No	4		
	DC 3 GH 1				
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		Unit	Quantity	Rate	Amount
22	'Cobra NM' Chromium plated single-hole basin mixer (Code: FBN1D1NM-OGT0050 / NM-851) DC 1	No	1		
23	'Cobra Focus' Chromium plated single-hole sink mixer (Code: FSK1D1FO-OGT0122 / FC-970) DC 1 GH 1	No	2		
	<u>Pressure reducing valves, vacuum breakers, etc.</u>				
24	22mm 600kPa Mono pressure control valve (code KH3.116) DC 1	No	1		
25	22mm Vacuum breaker (code KHN4.200CX) DC 1	No	1		
	<u>SANITARY PLUMBING (CPAP Work Group No 148)</u>				
	<u>uPVC pipes</u>				
26	40mm pipes DC 8 GH 2	m	10		
27	50mm Pipes DC 2 GH 2	m	4		
28	110mm Pipes DC 8 GH 2	m	10		
29	40mm Pipes chased into brick walls DC 8 GH 2	m	10		
30	50mm Pipes chased into brick walls DC 4	m	4		
	<u>Extra over uPVC pipes for fittings</u>				
31	50mm Straight reducer DC 1	No	1		
32	110mm Straight reducer DC 1	No	1		
33	40mm Bend DC 8 GH 2	No	10		
34	50mm Bend DC 3 GH 3	No	6		
35	110mm Bend DC 4 GH 1	No	5		
36	40mm Access bend DC 8 GH 2	No	10		
37	50mm Access bend SB 3 GH 3	No	6		
38	110mm Access bend Un/A 4 GH 1	No	5		
	Carried to Collection				
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		Unit	Quantity	Rate	Amount
39	110mm Access bend with anti-syphon horn	No	5		
	DC 4 GH 1				
40	40mm Junction	No	2		
	DC 2				
41	50mm Junction	No	2		
	DC 2				
42	110mm Junction	No	5		
	DC 4 GH 1				
43	110mm Double junction	No	1		
	DC 1				
44	40mm Access junction	No	3		
	DC 3				
45	50mm Access junction	No	2		
	DC 2				
46	110mm Access junction	No	5		
	DC 4 GH 1				
47	50 x 40mm Access reducing junction	No	1		
	DC 1				
48	110 x 40mm Access reducing junction	No	5		
	DC 4 GH 1				
49	110 x 50mm Access reducing junction	No	1		
	DC 1				
50	110mm Straight pan connector	No	4		
	DC 3 GH 1				
51	110mm Bent pan connector	No	1		
	DC 1				
52	50mm Air release vent valve	No	1		
	DC 1				
53	110mm Air release vent valve	No	2		
	DC 1 GH 1				
	Testing				
54	Testing waste pipe system, complete	Item			
	I 1				
	<u>WATER SUPPLIES (CPAP Work Group No 148)</u>				
	<u>Class 2 Copper pipes</u>				
55	15mm Pipes	m	30		
	DC 25 GH 5				
56	22mm Pipes	m	30		
	DC 20 GH 10				
57	28mm Pipes	m	15		
	DC 10 GH 5				
	Carried to Collection				
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		Unit	Quantity	Rate	Amount
58	35mm Pipes	m	6		
	DC 6				
59	15mm Pipes chased into brick walls	m	45		
	DC 35 GH 10				
60	22mm Pipes chased into brick walls	m	20		
	DC 10 GH 10				
	<u>Extra over class 2 copper pipes for capillary fittings</u>				
61	15mm Fittings	No	75		
	DC 55 GH 20				
62	22mm Fittings	No	30		
	DC 20 GH 10				
63	28mm Fittings	No	9		
	DC 6 GH 3				
64	35mm Elbow	No	1		
	DC 1				
65	35mm Reducer	No	1		
	DC 1				
66	35mm Tee	No	1		
	DC 1				
	<u>Extra over class 2 copper pipes for brass compression fittings</u>				
67	15mm Fittings	No	85		
	DC 65 GH 20				
68	22mm Fittings	No	50		
	DC 30 GH 20				
69	28mm Fittings	No	9		
	DC 6 GH 3				
70	35mm Elbow	No	1		
	DC 1				
71	35mm Reducer	No	1		
	DC 1				
72	35mm Tee	No	1		
	DC 1				
Carried to Collection					
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		Unit	Quantity	Rate	Amount
	<u>ELECTRIC WATER HEATERS (CPAP Work Group No 148)</u>				
	<u>'Kwikhot' standard geysers (SABS 151:1992)</u>				
73	200 Litre 'Kwikhot Standard 600 Dual' (Code EF200D) horizontally wall mounted electric water heater with 22mm fittings complete with mounting brackets (Code BKT), draincock, two vacuum breakers (Code KHN4.200CX) and 22mm 600kPa 'Kwikhot Multi control and expansion relief valve (Code KHN3-216), etc installed complete	No	1		
	DC 1				
	<u>Black polyethylene geyser trays (SABS 1848:2000)</u>				
74	Polyethylene geyser drip tray size 1600 x 600mm with union and backnut	No	1		
	DC 1				
75	50mm uPVC black polythene overflow pipe fixed to steel roof member at 1500mm centres	m	6		
	DC 6				
76	Extra over 50mm uPVC black polythene overflow pipe for bend	No	4		
	DC 4				
	<u>WATER BOILERS AND CHILLERS (CPAP Work group No 148)</u>				
	<u>'Cobra Watertech' water boilers and water chillers</u>				
77	'Cobra Watertech Prisma Deluxe H-PU-10' 10l vertical mounted water heater with gloss finish non-corrosive polypropylene outer casing	No	2		
	DC 1 GH 1				
	<u>TESTING (CPAP Work group No 148)</u>				
	<u>Testing</u>				
78	Testing water pipe system	Item			
	I 1				
	<u>LAGGING (CPAP Work group No 148)</u>				
	<u>'Thermaflex' preformed polyethylene foam lagging or similar approved insulation</u>				
79	Wrapped around 15mm pipe	m	15		
	DC 12 GH 3				
80	Wrapped around 22mm pipe	m	15		
	DC 10 GH 5				
81	Wrapped around 28mm pipe	m	5		
	DC 5				
	Carried to Collection				
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		Unit	Quantity	Rate	Amount
	<u>Extra over 'Thermaflex' preformed polyethylene foam lagging or similar approved insulation for lagging to fittings</u>				
82	15mm Fittings	No	15		
	DC 10 GH 5				
83	22mm Fittings	No	15		
	DC 10 GH 5				
84	28mm Fittings	No	2		
	DC 2				
	<u>Extra over 'Thermaflex' preformed polyethylene foam lagging or similar approved insulation for lagging to valves</u>				
85	15mm Valve	No	2		
	DC 1 GH 1				
86	22mm Valve	No	2		
	DC 1 GH 1				
	<u>SLEEVES (CPAP Work Group No 148)</u>				
	<u>Plastic sleeves for pipes not exceeding 100mm diameter</u>				
87	Sleeve not exceeding 250mm long	No	10		
	DC 5 SB 5				
88	Sleeve exceeding 250mm and not exceeding 500mm long	No	7		
	DC 5 SB 2				
	<u>Plastic sleeves for pipes exceeding 100mm and not exceeding 200mm diameter</u>				
89	Sleeve not exceeding 250mm long	No	7		
	DC 5 SB 2				
90	Sleeve exceeding 250mm and not exceeding 500mm long	No	4		
	DC 2 SB 2				
	<u>HOLES ETC (CPAP Work Group No 148)</u>				
	<u>Core drilling of hole for pipe not exceeding 50mm diameter</u>				
91	275mm Reinforced concrete slab, beam, wall, etc.	No	20		
	DC 20				
	<u>Core drilling of hole for pipe exceeding 50mm and not exceeding 100mm diameter</u>				
92	275mm Reinforced concrete slab, beam, wall, etc.	No	10		
	DC 10				
	Carried to Collection				
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		Unit	Quantity	Rate	Amount
	<u>Core drilling of hole for pipe exceeding 100mm and not exceeding 150mm diameter</u>				
93	275mm Reinforced concrete slab, beam, wall, etc. DC 20	No	20		
	<u>Core drilling of hole for pipe exceeding 200mm and not exceeding 250mm diameter</u>				
94	275mm Reinforced concrete slab, beam, wall, etc. DC 1	No	1		
Carried to Collection					R
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Amount

SECTION NO. 2

BUILDING WORKS

BILL NO. 14

PLUMBING AND DRAINAGE

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	Unit	Quantity	Rate	Amount
<u>SECTION NO. 2</u> <u>BUILDING WORKS</u> <u>BILL NO. 16</u> <u>PAINTWORK</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Proprietary items or materials</u>				
<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>				
<u>Project particular specifications</u>				
<p>The specifications particular to this project are included in C3.2 Particular Specifications: Construction Works included in Envelope A Volume 1 of 2 of the tender documents. The Contractor is to take cognisance of them when pricing the relevant items in the Bill of Quantities as no extras arising out of their failure to do so will be entertained</p>				
<u>Paint</u>				
<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>				
Carried to Collection			R	
Section No. 2 Bill No. 16 Paintwork				

		Unit	Quantity	Rate	Amount
<u>PAINTWORK ETC TO NEW WORK</u>					
<u>ON FLOATED PLASTER SURFACES</u>					
<u>Prepare surfaces and remove all loose material, apply one coat Plascon Alkali Resistant Plaster Primer (UC56), one coat Plascon Universal Undercoat (UC1) and two coats Plascon Double Velvet Pure Acrylic paint on</u>					
1	Internal plastered walls	m ²	3 240		
	DC 2704 SB 499 GH 37				
2	External plastered walls	m ²	1 391		
	DC 1005 SB 339 GH 47				
<u>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, on</u>					
3	External plastered walls	m ²	90		
	DC 90				
<u>ON SMOOTH CONCRETE SURFACES</u>					
<u>Prepare surfaces and remove all loose material, apply one coat Plascon Alkali Resistant Plaster Primer (UC56), one coat Plascon Universal Undercoat (UC1) and two coats Plascon Double Velvet Pure Acrylic paint, including stopping blow holes, on</u>					
4	Ceilings and beams	m ²	254		
	DC 254				
<u>SPECIALISED EPOXY TYPE FLOOR COATINGS</u>					
<u>Flowshield SL ESD</u>					
<u>Prepare surface and fully seal the prepared surface by applying the necessary coats of Flowprime, allow the primer to harden and apply copper tape in grid format at a maximum of 3m intervals, allowing at least one earth point per every 100 m² of grid. Apply A.S. Black primer over entire floor area, allow the primer to harden and apply Flowshield ESD to a minimum thickness of 2mm. The multiple-component systems are to be carried out in strict accordance with the detailed manufacturer's instructions</u>					
5	On interior steel or power floated concrete floors including all necessary grinding, etc.	m ²	300		
	DC 257 SB 43				
6	Extra over for copper tape bridging over floor joints	m	25		
	DC 20 SB 5				
Carried to Collection				R	
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Bill No. 16					
Paintwork					

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		Unit	Quantity	Rate	Amount
	<u>Three coats Woodoc 50 exterior marine quality clear matt sealer on</u>				
15	Louvered windows and doors	m ²	3		
	DC 3				
16	Door frames etc. not exceeding 300mm girth	m	5		
	DC 5				
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Bill No. 16					
Paintwork					

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BUILDING WORKS
BILL NO. 16
PAINTWORK
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Bill No. 16
Paintwork

	Unit	Quantity	Rate	Amount
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BILL NO. 17				
EXTERNAL WORKS				
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				
<u>YARD AREAS, APRONS, ETC</u>				
<u>EARTH FILLING, ETC (CPAP Work Group No 104)</u>				
<u>Earth filling supplied by the contractor under pavings, etc</u>				
1 Under floors, pavings, ramps, etc. of G7 base course material in accordance with SABS 1200 DM compacted to 95% Mod AASHTO density	m ³	43		
DC 43				
2 Under floors, pavings, ramps, etc. of G5 base course material in accordance with SABS 1200 DM compacted to 95% Mod AASHTO density	m ³	43		
DC 43				
<u>Surface Preparation</u>				
3 Trim and level off surface of ground (excavated or filled under this contract) to receive concrete surface beds,paving etc. including excavating or filling, ripping and scarifying as necessary and compacting the whole area for a depth of 150mm to a density of at least 93% Mod. AASHTO maximum density, part to falls	m ²	285		
DC 285				
<u>BOND AND INTERLOCKING CONCRETE BLOCK PAVERS (CPAP Work Group No 112)</u>				
<u>Paving of 25Mpa Bosun concrete Small Urban paver colour Grey, size 200 x 100 x 60mm thick, laid in accordance with SANS 1200 MJ and CMA Concrete Block Paving Manuals on and including 20mm thick river sand bed with dry filler sand swept and vibrated into joints including treatment with weed killer, all laid on subgrade (elsewhere measured) conforming to SABS 1200D degree of accuracy I</u>				
4 Paving in herringbone bond to sidewalks and pathways to falls	m ²	285		
DC 285				
5 Fair circular cutting and waste to paving	m	5		
DC 5				
Carried to Collection			R	
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External Works				

		Unit	Quantity	Rate	Amount
	<u>Paving of 25Mpa Bosun concrete Medium Urban paver colour Tan, size 200 x 150 x 60mm thick, laid in accordance with SANS 1200 MJ and CMA Concrete Block Paving Manuals on and including 20mm thick river sand bed with dry filler sand swept and vibrated into joints including treatment with weed killer, all laid on subgrade (elsewhere measured) conforming to SABS 1200D degree of accuracy I</u>				
6	200mm Wide brick-on-flat header course edging DC 265	m	265		
7	220mm Wide brick-on-flat header course edgings, circular on plan with tapered radiating joints DC 5	m	5		
	<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>				
8	Paving to parking areas etc. to falls DC 15	m ²	15		
9	Extra over for straight edge blocks DC 16	m	16		
10	Fair circular cutting and waste to paving DC 4	m	4		
	<u>ROADWORK (CPAP Work Group No 154)</u>				
	<u>Bituminous premix road surfacing</u>				
	All surfacing and patching to be done in accordance with the specification of COLTO (Standard Specification Road and Bridge Works for State Authorities 1998) and the manufacturers				
11	30mm Paving to parking areas, roadways, in patches, etc. DC 20	m ²	20		
Carried to Collection					R
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Bill No. 17					
External Works					

		Unit	Quantity	Rate	Amount
<u>PRECAST CONCRETE KERBS (CPAP Work Group No 112)</u>					
<u>Precast concrete kerbing (complying with SABS 927) in 1m lengths, wet presses, placed in position, bedded on and including 10Mpa/19mm unreinforced concrete minimum 50mm thick bedding and jointed in (3:1) cement mortar and flush pointed on exposed faces, including 15MPa/19mm continuous unreinforced concrete haunching at back of kerbing, excavation, backfilling, ramming, etc.</u>					
12	Edge kerb (Figure 10) 250 x 200mm high DC 50	m	50		
13	Edge kerb (Figure 10) 100 x 250mm high circular on plan not exceeding 4m radius formed with 330mm lengths of straight kerb DC 2	m	2		
14	Edge kerb (Figure 10) 100 x 250mm high circular on plan exceeding 4m radius formed with 330mm lengths of straight kerb DC 3	m	3		
Carried to Collection				R	
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Bill No. 17					
External Works					

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BILL NO. 17
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External Works

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SECTION SUMMARY

SECTION NO. 3
EXTERNAL WORKS

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>EXTERNAL WORKS</u>				
<u>BILL NO. 1</u>				
<u>SITE CLEARANCE AND BULK EARTHWORKS</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Earthworks</u>				
<p>All earthworks shall be done in accordance with the SABS 1200 specifications</p>				
<u>Nature of ground and anticipated methodology</u>				
<p>The site is overlay with patches of unsuitable material which must be removed and replaced with suitable material to create a soil raft under the roads and parking areas. The anticipated methodology is to first construct a platform, as per the engineers drawings, followed by a box cut to the road reserve and surrounding areas. Unsuitable material is to be removed and replaced with G7 engineered fill, compacted to 93% MOD Aashto Density in layers not exceeding 150mm thickness. The Contractor is expected to consider this methodology when pricing this section of the work</p>				
<u>Top soil</u>				
<p>All supplied material shall be free of harmful deposits such as salts, weed seeds and waste of any kind</p>				
<u>Definitions</u>				
<p>"Earth" shall mean ground that can be removed by hand tools and shall include loose gravel, clay, made up ground, loose or soft shale, loose oukclip and any loose boulders less than 75mm in diameter</p>				
<p>"Soft rock" shall mean rock that can be loosened by hand, pick or crowbar and includes hard shale, compact oukclip, stone of a similar hardness and boulders from 75mm diameter up to 0,03 cubic meters in volume</p>				
<p>"Hard rock" shall mean granite, quartzitic sandstone, slate and rock of similar or greater hardness and boulders from over 0,03 cubic meters in volume</p>				
Carried to Collection			R	
Section No. 3				
Bill No. 1				
Site Clearance And Bulk Earthworks				

	Unit	Quantity	Rate	Amount
<u>Carting away of excavated material</u>				
Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site				
<u>Filling</u>				
All filling material is to be approved by the Engineer before filling commences				
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				
<u>Working space behind retaining walls</u>				
The bulk earthwork quantities below include for working space excavation behind retaining walls. Backfilling has been measured with the respective trades to the builders work in retaining walls				
<u>SITE CLEARANCE ETC</u>				
<u>Site clearance</u>				
1		Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc. and trees not exceeding 200mm girth, including grubbing up all roots, scoffling up as required and carting away	m ²	7 900
2		Stripping average 200mm thick layer of top soil and depositing material in prescribed stock piles on site	m ²	7 900
<u>REMOVAL OF TREES ETC</u>				
<u>Cutting down and removing, grubbing up roots and filling in holes</u>				
3		Tree exceeding 1000mm and not exceeding 1500mm girth	No	4
<u>BULK EXCAVATIONS ETC</u>				
<u>Open face excavation in earth over sloping site</u>				
4		Open face excavation	m ³	2 100
<u>Extra over bulk excavations in earth for excavation in</u>				
5		Soft rock	m ³	210
6		Hard rock	m ³	105
Carried to Collection				R
Section No. 3				
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Site Clearance And Bulk Earthworks				

		Unit	Quantity	Rate	Amount
	<u>Extra over all excavations for carting away</u>				
7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m³	3 186		
	<u>Risk of collapse of excavations</u>				
8	Sides of bulk excavations not exceeding 1,5m deep	m²	267		
	<u>Keeping excavations free of water</u>				
9	Keeping excavations free of water other than subterranean water	Item			
	<u>BULK FILLING ETC</u>				
	<u>Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 93% Mod AASHTO density, in layers not exceeding 150mm thick</u>				
10	Over site to form platforms	m³	300		
	<u>Earth filling of G7 material in accordance with SANS 1200 DM supplied by the contractor, compacted to at least 93% Mod AASHTO density, in layers not exceeding 150mm thick</u>				
11	Over site to form platforms, road platforms, etc.	m³	1 980		
	<u>Compaction of surfaces</u>				
12	Compaction of ground surface including scarifying for a depth of 150mm, breaking down oversize material and compacting to 90% Mod AASHTO density	m²	7 900		
	<u>Prescribed density tests on filling</u>				
13	Modified AASHTO Density test	No	10		
14	Natural California Bearing Ratio test	No	1		
15	Road Indicator test	No	4		
16	Field Density test including Optimum Moisture Content (four readings per test)	No	5		
	<u>TREES</u>				
	The tenderer is to allow in his price for watering all newly planted trees twice a week for the first three months				
17	Harpephyllum caffrum (wild plum or umgwenya), 900mm high including planting, fertilizing, staking, mulching and watering as by a specialist subcontractor or nursery	No	10		
Carried to Collection					R
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Site Clearance And Bulk Earthworks					

		Unit	Quantity	Rate	Amount
<u>GRASSING</u>					
<u>Ground preparation</u>					
18	Cultivation and preparation of areas to be planted, including general shaping and trimming of ground	m²	2 055		
<u>Topsoil, compost, lime and fertilizer</u>					
19	Topsoil obtained from prescribed stock piles on site spread and levelled to average 150mm thick to areas around structures where directed and including in-place treatment of filled topsoil material by ripping, scarifying for a depth of 150mm and breaking down oversize material	m²	1 290		
20	Ditto of supplied suitable cleaned sifted topsoil varied between sandy loamy soil and sandy clayey soil with an ideal ratio of 15% to 25% clay, 10% silt / sludge and 65% to 75% sand, with a minimum ratio of organic material of 2% of volume, spread and levelled to average 150mm thick including preparation work as before decribed	m²	765		
21	Supply as filling (not compacted) suitable clean sifted topsoil varied between sandy loamy soil and sandy clayey soil with an ideal ratio of 15% to 25% clay, 10% silt / sludge and 65% to 75% sand, with a minimum ratio of organic material of 2% of volume, to garden beds, etc.	m³	50		
<u>Fertilizing</u>					
22	Fertilize garden top soil with 3:2:1 super phosphate spread at a rate of 1kg/10m² including working evenly into top 20mm depth of soil	m²	2 055		
<u>Grassing of Kikuyu grass or equally approved sods laid over site</u>					
23	Kikuyu grass or equally approved sods approximately 500 x 500 x 50mm thick over topsoiled areas including watering and maintainance, etc. until practical completion on the project (3 months maintenance period after practical completion elsewhere measured)	m²	2 055		
<u>Maintenance</u>					
24	Maintenance of grassed and ground covered areas for a period of 3 months (total area approximately 2055m²) including weekly weeding and irrigating as necessary	Item			
				R	
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EXTERNAL WORKS

BILL NO. 1

SITE CLEARANCE AND BULK EARTHWORKS

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Bill No. 1

Site Clearance And Bulk Earthworks

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u> <u>EXTERNAL WORKS</u> <u>BILL NO. 2</u> <u>SOIL DRAINAGE AND RETICULATION</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<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 and Engineer</p>				
<u>uPVC pipes and fittings</u>				
<p>Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings</p>				
<p>Soil, waste and vent pipes and fittings shall be solvent weld jointed</p>				
<u>Exposed concrete surfaces</u>				
<p>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>				
<u>Excavations</u>				
<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>				
<u>Laying, backfilling, bedding, etc of pipes</u>				
<p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in cordance with manufacturers' and engineers instructions</p>				
Carried to Collection			R	
Section No. 3 Bill No. 2 Soil Drainage And Reticulation				

	Unit	Quantity	Rate	Amount
<p>Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following: SANS 1200L : Medium-pressure pipelines SANS 1200LD : Sewers SANS 1200LE : Stormwater drainage. Pipe trenches, etc. shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200DB : Earthworks (Pipe trenches). Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200LB : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be Class B bedding</p> <p><u>Manholes</u></p> <p>Step irons to be spaced at 300mm centres vertically and staggered at 200mm centres horizontally, starting 500mm below cover level</p> <p>Benching to be finished with minimum 20mm thick 1:3 cement mortar</p> <p>Couplings to be provided immediately outside manholes on each branch and outlet</p> <p>All manholes to be done by a registered plumber in accordance with the relevant code</p> <p>All manholes to be tested for water tightness and recorded for as-built information</p> <p><u>SOIL DRAINAGE (CPAP WORK GROUP NO. 146)</u></p> <p><u>Excavation, etc. for soil drainage</u></p>				
1				
Excavation in earth not exceeding 1m deep for pipe trenches, chambers, etc.		m ³	82	
2				
Excavation in earth exceeding 1m and not exceeding 2m deep for pipe trenches, chambers, etc.		m ³	24	
3				
Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock		m ³	15	
4				
Extra over excavation in earth for pipe trenches, chambers, etc for excavation in hard rock		m ³	10	
5				
Extra over excavation for pipe trenches, chambers, etc. for carting away surplus material to a dumping site to be located by the contractor		m ³	8	
6				
Risk of collapse of excavations to sides of trench and hole excavations not exceeding 1,5m deep		m ²	285	
7				
Risk of collapse of excavations to sides of trench and hole excavations exceeding 1,5m deep		m ²	15	
8				
Keeping excavations free of all water other than subterranean water		Item		
Carried to Collection			R	
Section No. 3				
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Soil Drainage And Reticulation				

		Unit	Quantity	Rate	Amount
9	Backfilling to pipe trenches, chambers, etc. with earth filling obtained from the excavations and/or stock piles on site, compacted to 90% Mod AASHTO density	m ³	98		
10	Extra over ditto (earth filling obtained from the excavations and/or stock piles on site) for selecting suitable earth filling	m ³	38		
11	Selected granular filling in bedding under and filling around pipes	m ³	8		
12	Extra over bedding under and filling around pipes for suitable granular filling supplied by the contractor	m ³	8		
13	Extra over bedding material for stabilising with 5% Portland blast furnace cement (by volume) Provisional	m ³	20		
14	Unreinforced concrete (15MPa) bedding under pipes	m ³	2		
15	Unreinforced concrete (15MPa) encasing to horizontal pipe	m ³	2		
	<u>Heavy duty (Class 400) uPVC sewer and drain pipes to SANS 1601-1994</u>				
16	110mm Pipes laid in trenches (trenches elsewhere measured)	m	10		
17	160mm Pipes laid in trenches (trenches elsewhere measured)	m	100		
18	250mm Pipes laid in trenches (trenches elsewhere measured) as sleeve ducts	m	20		
	<u>Extra over heavy duty (Class 400) uPVC sewer and drain pipes for fittings to SANS 1601-1994</u>				
19	110mm Bend	No	1		
20	160mm Bend	No	2		
21	110mm Access bend	No	1		
22	160mm Access bend	No	2		
23	110mm Access junction	No	1		
24	160mm Access junction	No	2		
25	160mm Access reducing junction	No	1		
26	160mm Straight reducer	No	1		
27	110mm End cap	No	1		
28	160mm End cap	No	1		
	Carried to Collection				
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	Soil Drainage And Reticulation				

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		Unit	Quantity	Rate	Amount
29	160 x 110mm Y-Junction	No	1		
30	160mm Y-Junction	No	1		
	<u>SUMPS, CATCHPITS, INSPECTION CHAMBERS, ETC</u> <u>(CPAP WORK GROUP NO. 146)</u>				
	References in the items below refer to the relevant details of sewer sumps, catchpits, inspection chambers, etc. attached to these bills of quantities				
	<u>Precast concrete gully, etc.</u>				
31	200mm Precast concrete gully dish and uPVC lowback assembly complete with 110mm 'P' trap gulley (code UGB 40) including 190mm diameter head (code UGA 40) and grate (code UGG 40), not exceeding 750mm deep, jointed to 110mm drain pipe, including excavations for and encasing in concrete (15MPa crushing strength after 28 days) worked up to form kerb, finished smooth on top in 1:3 cement mortar	No	2		
	<u>Precast concrete circular inspection chambers including precast concrete cover slabs (lid and frame elsewhere) and channels in benching</u>				
32	1000mm Diameter manhole chamber not exceeding 1000mm deep internally, comprising 270mm thick mesh reinforced (Ref 395) 25MPa concrete base, single course 220mm brick edge, 200mm thick rod reinforced 25MPa concrete slab over, benching, sealing of manhole joints with Bitu-Joint sealer, etc. all as per attached engineers drawing number D4A	No	2		
33	1000mm Diameter manhole chamber exceeding 1000mm and not exceeding 2000mm deep internally, comprising 270mm thick mesh reinforced (Ref 395) 25MPa concrete base, single course 220mm brick edge, 200mm thick rod reinforced 25MPa concrete slab over, benching, sealing of manhole joints with Bitu-Joint sealer, etc. all as per attached engineers drawing D4A	No	2		
	<u>Gratings, covers, etc.</u>				
34	Heavy duty cover SABS 558 Type 2A cast iron manhole cover and modified frame	No	4		
	<u>Sundries</u>				
35	Cast iron floor drain as Eze-Flo (Desaans-Du Plessis No. 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 attached engineers drawing number D4C	No	1		
	Carried to Collection				
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	Soil Drainage And Reticulation				

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		Unit	Quantity	Rate	Amount
36	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		
37	Tie existing 160mm diameter sewer pipe into existing sewer network including making good, etc.	No	1		
38	Cutting into side of existing inspection chamber or manhole for and connecting 160mm diameter uPVC pipe, including inserting necessary channel junction fittings and making good concrete benching and manhole sides	No	1		
39	Excavate for, locate and cut into existing 160mm pipe exceeding 1000 and not exceeding 2000Mm deep, and insert end cap to one end (remainder of pipe will become redundant), backfill, etc.	No	1		
40	25Mpa Unreinforced concrete encasement to pipes and in thrust blocks in trenches at bends, tees, etc, including extra excavation, formwork, etc.	m ³	1		
	<u>Testing</u>				
41	Testing soil drainage system	Item			
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Soil Drainage And Reticulation					

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EXTERNAL WORKS

BILL NO. 2

SOIL DRAINAGE AND RETICULATION

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Bill No. 2

Soil Drainage And Reticulation

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u> <u>EXTERNAL WORKS</u> <u>BILL NO. 3</u> <u>STORMWATER DRAINAGE</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<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 and Engineer</p>				
<p>All Stormwater Drainage shall be done in accordance with the SANS 1200 DB, LB and LE specifications</p>				
<u>Concrete pipes</u>				
<p>Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings, as described in the relevant description of the pipe</p>				
<u>Exposed concrete surfaces</u>				
<p>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>				
<u>Excavations</u>				
<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>				
<u>Laying, backfilling, bedding, etc of pipes</u>				
<p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in cordance with manufacturers' and engineers instructions</p>				
Carried to Collection			R	
Section No. 3 Bill No. 3 Stormwater Drainage				

	Unit	Quantity	Rate	Amount
<p>Where no manufacturers' instructions exist, pipes shall be laid in accordance with Clauses 5.1 and 5.2 of each of the following: SANS 1200L : Medium-pressure pipelines SANS 1200LD : Sewers SANS 1200LE : Stormwater drainage. Pipe trenches, etc. shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200DB : Earthworks (Pipe trenches). Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200LB : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be Class B bedding</p> <p><u>STORMWATER DRAINAGE (CPAP Work Group No 146)</u></p> <p><u>Excavation, etc. for stormwater drainage</u></p>				
1				
Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc. and trees not exceeding 200mm girth (to pipe runs off site)				
	m ²	15		
2				
Stripping average 150mm thick layer of top soil and depositing material in prescribed stock piles on site (to pipe runs off site)				
	m ²	15		
3				
Excavation in earth not exceeding 1m deep for pipe trenches, chambers, etc				
	m ³	144		
4				
Excavation in earth exceeding 1m and not exceeding 2m deep for pipe trenches, chambers, etc.				
	m ³	144		
5				
Excavation in earth exceeding 2m and not exceeding 4m deep for pipe trenches, chambers, etc.				
	m ³	87		
6				
Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock				
	m ³	40		
7				
Extra over excavation in earth for pipe trenches, chambers, etc for excavation in hard rock				
	m ³	20		
8				
Extra over excavation for pipe trenches, chambers, etc. for carting away surplus material to a dumping site to be located by the contractor				
	m ³	14		
9				
Risk of collapse of excavations to sides of trench and hole excavations not exceeding 1,5m deep				
	m ²	304		
10				
Risk of collapse of excavations to sides of trench and hole excavations exceeding 1,5m deep				
	m ²	654		
11				
Keeping excavations free of all water other than subterranean water				
	Item			
Carried to Collection				R
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Stormwater Drainage				

		Unit	Quantity	Rate	Amount
12	Backfilling to pipe trenches, chambers, etc. with earth filling obtained from the excavations and/or stock piles on site, compacted to 90% Mod AASHTO density	m ³	359		
13	Extra over ditto (earth filling obtained from the excavations and/or stock piles on site) for selecting suitable earth filling	m ³	112		
14	Selected granular filling in bedding under and filling around pipes	m ³	14		
15	Extra over bedding under and filling around pipes for suitable granular filling supplied by the contractor	m ³	14		
16	Unreinforced concrete (15MPa) bedding under pipes	m ³	1		
17	Unreinforced concrete (15MPa) encasing to horizontal pipe	m ³	1		
	<u>Class 9 uPVC pipes</u>				
18	315mm Diameter pipes laid in trenches (trenches elsewhere meaasured)	m	20		
	<u>Class 100D concrete pipes with spigot and socket joints with rubber rings to SANS 677-2010</u>				
19	450mm Diameter pipes laid in trenches (trenches elsewhere meaasured)	m	120		
20	600mm Diameter pipes laid in trenches (trenches elsewhere measured)	m	45		
	<u>SUMPS, CATCHPITS, INSPECTION CHAMBERS, ETC (CPAP WORK GROUP NO. 146)</u>				
	References in the items below refer to the relevant details of stormwater sumps, catchpits, inspection chambers, etc. attached to these bills of quantities				
	<u>Sumps, catchpits, inspection chambers, etc. including concrete kerbs or precast concrete cover slabs (manhole lids, gratings and frames elsewhere)</u>				
21	Brick grid inlet catchpit chamber 900 x 900mm internally exceeding 1000mm and not exceeding 2000mm deep internally, comprising 150mm thick mesh reinforced (Ref 395) 25 Mpa concrete base, one brick wall to full height, 200mm thick rod reinforced 25 MPa concrete slab over, benching, internal plaster, opening for grating (grating and frame elsewhere measured), etc. all as per attached engineers drawing number D101A	No	1		
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		Unit	Quantity	Rate	Amount
22	Brick manhole catchpit chamber 900mm x 900mm internally exceeding 2000mm and not exceeding 3000mm deep internally, comprising 150mm mesh reinforced (Ref 395) 25 Mpa concrete base, one brick wall to full height, 200mm thick rod reinforced 25 Mpa concrete cover slab, benching, internal plaster, step irons at max 250mm centres, opening for manhole lid (manhole lid and frame elsewhere measured), etc. all as per attached engineers drawing number D101B	No	2		
23	Brick single splay kerb inlet chamber with side inlet, chamber overall size 815 x 1940mm internally exceeding 1000mm and not exceeding 2000mm deep internally, comprising 150mm mesh reinforced (Ref 395) 25 Mpa concrete base, one brick wall to full height, 125mm thick rod reinforced 25 Mpa concrete slab over, benching, internal plaster, 126 X 64mm GMS edge channel 2400mm long, short length Fig 3 kerb support, etc. all as per attached engineers drawing number D101C	No	2		
24	Brick single splay kerb inlet chamber with side inlet, chamber overall size 815 x 1940mm internally exceeding 2000mm and not exceeding 3000mm deep internally, comprising 150mm mesh reinforced (Ref 395) 25 Mpa concrete base, one brick wall to full height, 125mm thick rod reinforced 25 Mpa concrete slab over, benching, internal plaster, 126 X 64mm GMS edge channel 2400mm long, short length Fig 3 kerb support, etc. all as per attached engineers drawing number D101C	No	3		
	<u>Stormwater gratings, covers, etc.</u>				
25	Heavy duty cover SABS 558 Type 2A cast iron manhole cover and modified frame	No	2		
26	Hot dipped galvanised grating size 600 x 600mm comprising 40 x 8mm flat iron support frame and centre pieces at 50mm centres, set in and including support frame of 45 x 45 x 6mm angle frame with lugs cast into concrete surround (concrete elsewhere measured), all as per attached engineers drawing number D101A	No	1		
27	Lifting-key for manhole cover (handed to employer)	No	1		
	<u>Headwalls, erosion protection, etc.</u>				
28	Brick headwall with outlet structure to suite 315mm diameter stormwater pipe, comprising 150mm mesh reinforced (Ref 311) 25 Mpa concrete base with toe, one brick walls, 6 x Fig 7 water dissipation blocks, etc. all as per attached engineers drawing number D3C	No	1		
	Carried to Collection				
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	Stormwater Drainage				

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		Unit	Quantity	Rate	Amount
	<u>Sundries</u>				
29	Excavate for, locate and cut into sides of existing manhole for and connecting 315mm diameter pipe, including making good concrete benching and manhole sides	No	1		
30	Excavate for, locate and cut into sides of existing manhole for and connecting 600mm diameter pipe, including making good concrete benching and manhole sides	No	1		
31	Excavate for, locate and connect 315mm diameter stormwater pipe into existing stormwater network including making good, etc.	No	1		
32	Excavate for, locate and connect 600mm diameter stormwater pipe into existing stormwater network including making good, etc.	No	1		
33	25Mpa Unreinforced concrete encasement to pipes and in thrust blocks in trenches at bends, tees, etc, including extra excavation, formwork, etc.	m ³	2		
	<u>Testing</u>				
34	Testing stormwater drainage pipe system	Item			
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EXTERNAL WORKS

BILL NO. 3

STORMWATER DRAINAGE

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Bill No. 3

Stormwater Drainage

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>EXTERNAL WORKS</u>				
<u>BILL NO. 4</u>				
<u>BULK WATER RETICULATION</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<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 and Engineer</p>				
<u>uPVC pressure pipes and fittings</u>				
<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>				
<u>Reducing fittings</u>				
<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>				
<u>Corrosion protection</u>				
<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/m³</p>				
<u>Joints, bolts, nuts and washers</u>				
<p>Bolts, nuts and washers shall be treated as follows</p>				
Carried to Collection			R	
Section No. 3				
Bill No. 4				
Bulk Water Reticulation				

	Unit	Quantity	Rate	Amount
<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><u>Corrosive soil</u></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><u>Galvanising</u></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/m³</p> <p>Inland areas 0.400 kg/m³</p> <p>"Coastal areas" shall apply to this contract unless specified otherwise</p> <p><u>Valves, etc.</u></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> <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>Section No. 3</p> <p>Bill No. 4</p> <p>Bulk Water Reticulation</p>				
<p>Carried to Collection</p>				
			R	

	Unit	Quantity	Rate	Amount
<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><u>Testing of valves</u></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><u>Disinfecting</u></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><u>Fixing of pipes</u></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>Carried to Collection</p>				
<p>Section No. 3</p> <p>Bill No. 4</p> <p>Bulk Water Reticulation</p>			R	

	Unit	Quantity	Rate	Amount
<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><u>Pipeline markers</u></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><u>Depth and cover</u></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><u>Excavations</u></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><u>Laying, backfilling, bedding, etc. of pipes</u></p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' and engineers 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: SANS 1200L : Medium-pressure pipelines SANS 1200LD : Sewers SANS 1200LE : Stormwater drainage. Pipe trenches, etc. shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200DB : Earthworks (Pipe trenches). Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200LB : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be Class B bedding</p>				
Carried to Collection				
Section No. 3				
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Bulk Water Reticulation				

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		Unit	Quantity	Rate	Amount
<u>Size of pipe work</u>					
All pipe diameters are nominal external					
<u>WATER SUPPLIES</u>					
<u>Excavation, etc. for water supplies</u>					
1	Excavation in earth not exceeding 1m deep for pipe trenches, chambers, etc.	m ³	133		
2	Excavation in earth exceeding 1m and not exceeding 2m deep for pipe trenches, chambers, etc.	m ³	133		
3	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock	m ³	30		
4	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in hard rock	m ³	15		
5	Extra over excavation for pipe trenches, chambers, etc. for carting away surplus material to a dumping site to be located by the contractor	m ³	13		
6	Risk of collapse of excavations to sides of trench and hole excavations not exceeding 1,5m deep	m ²	420		
7	Risk of collapse of excavations to sides of trench and hole excavations exceeding 1,5m deep	m ²	248		
8	Keeping excavations free of all water other than subterranean water	Item			
9	Backfilling to pipe trenches, chambers, etc. with earth filling obtained from the excavations and/or stock piles on site, compacted to 90% Mod AASHTO density	m ³	253		
10	Extra over ditto (earth filling obtained from the excavations and/or stock piles on site) for selecting suitable earth filling	m ³	40		
11	Selected granular filling in bedding under and filling around pipes	m ³	13		
12	Extra over bedding under and filling around pipes for suitable granular filling supplied by the contractor	m ³	13		
13	Unreinforced concrete (15MPa) bedding under pipes	m ³	1		
14	Unreinforced concrete (15MPa) encasing to horizontal pipe	m ³	1		
<u>Class 12 HDPe pipes to SANS ISO 4427</u>					
15	50mm Pipe laid in trenches (trenches elsewhere)	m	140		
Carried to Collection				R	
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Bulk Water Reticulation					

		Unit	Quantity	Rate	Amount
	<u>Extra over Class 12 HDPE pipes for Plasson fittings:</u>				
16	50mm Fittings	No	25		
	<u>Class 12 uPVC pressure pipes with spigot and socket joints to SANS 966-2003</u>				
17	50mm Pipe laid in trenches (trenches elsewhere)	m	4		
18	75mm Pipe laid in trenches (trenches elsewhere)	m	50		
19	110mm Pipe laid in trenches (trenches elsewhere)	m	8		
	<u>Extra over Class 12 uPVC pressure pipes for cast iron fittings</u>				
20	50mm 11.25 degree Bend	No	1		
21	75mm 11.25 degree Bend	No	10		
22	110mm 11.25 degree Bend	No	2		
23	50mm 22.5 degree Bend	No	1		
24	75mm 22.5 degree Bend	No	5		
25	110mm 22.5 degree Bend	No	2		
26	50mm 45 degree Bend	No	1		
27	75mm 45 degree Bend	No	5		
28	110mm 45 degree Bend	No	4		
29	50mm 90 degree Bend	No	1		
30	75mm 90 degree Bend	No	5		
31	110mm 90 degree Bend	No	2		
32	50mm End cap	No	1		
33	75mm End cap	No	1		
34	110mm End cap	No	1		
35	50mm Equal Tee	No	1		
36	75mm Equal Tee	No	1		
37	110mm Equal Tee	No	1		
38	75 x 50mm Reducer	No	2		
39	75 x 75 x 50mm Reducing Tee	No	1		
40	50mm Saddle including nuts and bolts and drilling boss and pipe	No	1		
	Carried to Collection				
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	Bulk Water Reticulation				

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		Unit	Quantity	Rate	Amount
41	75mm Saddle including nuts and bolts and drilling boss and pipe	No	2		
42	110mm Saddle including nuts and bolts and drilling boss and pipe	No	1		
	<u>Sundries</u>				
43	Precast concrete pipeline marker block size 200 x 200mm including lettering	No	20		
44	15Mpa Concrete encasement to pipes or thrustblocks including formwork, etc.	m ³	2		
	<u>Galvanised steel pipes with screwed and flanged joints, including Wrapid Bond wrapping to underground fittings</u>				
	References in the items below refer to the relevant details of the Building Supply Connection (BSC) as per attached engineers drawing number D102C				
45	75mm PVC flange adaptor	No	1		
46	80mm Diameter G.I. extension pipe 430mm long, with one end buttwelded to bend	No	1		
47	80mm Diameter G.I. extension pipe 1036mm long, with one end buttwelded to bend	No	1		
48	80mm Diameter G.I. puddle flange	No	2		
49	80mm Diameter 90 degree G.I. buttwelded long radius bend	No	1		
	<u>METER AND VALVE CHAMBERS (CPAP WORK GROUP NO. 148)</u>				
	References in the items below refer to the relevant details of meter and valve chambers attached to these bills of quantities				
	<u>Brick chambers for water meters, valves, etc.</u>				
50	Brick valve and meter chamber 2704 x 800mm internally exceeding 1000mm and not exceeding 2000mm deep internally, comprising 150mm mesh reinforced (Ref 395) 25 Mpa concrete base, one brick wall to full height, 150mm thick rod reinforced 25 Mpa concrete cover slab, internal plaster and opening for and including 600mm diameter circular SABS 558 Type 2A cast iron cover and frame and SABS 558 Type 7 valve access cover and frame including all necessary excavations, backfilling, carting away surplus material, etc. all as per attached engineers drawing number D102A	No	1		
	Carried to Collection				
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	Bulk Water Reticulation				

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		Unit	Quantity	Rate	Amount
51	Brick valve chamber 1935 x 800mm internally exceeding 1000mm and not exceeding 2000mm deep internally, comprising 150mm mesh reinforced (Ref 395) 25 Mpa concrete base, one brick wall to full height, 150mm thick rod reinforced 25 Mpa concrete cover slab, internal plaster and opening for and including 600mm diameter circular SABS 558 Type 2A cast iron cover and frame including all necessary excavations, backfilling, carting away surplus material, etc. all as per attached engineers drawing number D102B	No	1		
	<u>Water meters, valves and pipe fittings within and around the meter and valve chambers, all as per attached engineers drawing numbers D102A and D102B</u>				
52	Galvanised pipe size 80mm diameter x 524mm long with flanged ends	No	1		
53	Galvanised pipe size 100mm Diameter x 650mm long flanged pipe	No	2		
54	Galvanised pipe size 100mm Diameter x 893mm long flanged pipe	No	2		
55	100mm Diameter Cast Iron flange adaptor	No	2		
56	110/100mm Diameter Cast Iron flange adaptor	No	2		
57	100 x 80mm Flanged steel reducer	No	1		
58	100mm Diameter Viking Johnson or equally approved flanged adaptor	No	2		
59	80mm 'SENSUS' combination water meter with flanges drilled to table 16 and bolted joints	No	1		
60	80mm Diameter RSV left hand closing cast iron gate valve with flanged ends and cap top	No	1		
61	100mm Diameter RSV left hand closing cast iron gate valve with flanged ends and cap top	No	1		
62	100mm Diameter swing type non-return valve with 16 bar operating pressure and with flanged ends	No	2		
	<u>TESTING</u>				
	<u>Testing</u>				
63	Testing complete bulk water pipe line system	Item			
Carried to Collection					R
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Bulk Water Reticulation					

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SECTION NO. 3

EXTERNAL WORKS

BILL NO. 4

BULK WATER RETICULATION

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Bill No. 4

Bulk Water Reticulation

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>EXTERNAL WORKS</u>				
<u>BILL NO. 5</u>				
<u>WATER SUPPLY TO FIRE APPLIANCES</u>				
<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>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<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 and Engineer</p>				
<u>uPVC pressure pipes and fittings</u>				
<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>				
<u>Reducing fittings</u>				
<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>				
<u>Corrosion protection</u>				
<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/m²</p>				
<u>Joints, bolts, nuts and washers</u>				
<p>Bolts, nuts and washers shall be treated as follows</p>				
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Water Supply To Fire Appliances				

	Unit	Quantity	Rate	Amount
<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><u>Corrosive soil</u></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><u>Galvanising</u></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/m³</p> <p>Inland areas 0.400 kg/m³</p> <p>"Coastal areas" shall apply to this contract unless specified otherwise</p> <p><u>Valves, etc.</u></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> <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 style="text-align: right;">Carried to Collection</p>			R	
<p>Section No. 3</p> <p>Bill No. 5</p> <p>Water Supply To Fire Appliances</p>				

	Unit	Quantity	Rate	Amount
<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><u>Testing of valves</u></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><u>Disinfecting</u></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><u>Fixing of pipes</u></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>Carried to Collection</p>				
<p>Section No. 3</p> <p>Bill No. 5</p> <p>Water Supply To Fire Appliances</p>				

	Unit	Quantity	Rate	Amount
<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><u>Pipeline markers</u></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><u>Depth and cover</u></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><u>Excavations</u></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><u>Laying, backfilling, bedding, etc. of pipes</u></p> <p>Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' and engineers 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: SANS 1200L : Medium-pressure pipelines SANS 1200LD : Sewers SANS 1200LE : Stormwater drainage. Pipe trenches, etc. shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SANS 1200DB : Earthworks (Pipe trenches). Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SANS 1200LB : Bedding (Pipes). Unless otherwise described bedding of rigid pipes shall be Class B bedding</p>				
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Water Supply To Fire Appliances				

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	Unit	Quantity	Rate	Amount
<u>Size of pipe work</u>				
All pipe diameters are nominal external				
<u>WATER SUPPLIES TO FIRE APPLIANCES</u>				
<u>Excavation, etc. for water supplies</u>				
1	Excavation in earth not exceeding 1m deep for pipe trenches, chambers, etc.	m ³	142	
2	Excavation in earth exceeding 1m and not exceeding 2m deep for pipe trenches, chambers, etc.	m ³	142	
3	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock	m ³	30	
4	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in hard rock	m ³	15	
5	Extra over excavation for pipe trenches, chambers, etc. for carting away surplus material to a dumping site to be located by the contractor	m ³	14	
6	Risk of collapse of excavations to sides of trench and hole excavations not exceeding 1,5m deep	m ²	240	
7	Risk of collapse of excavations to sides of trench and hole excavations exceeding 1,5m deep	m ²	80	
8	Keeping excavations free of all water other than subterranean water	Item		
9	Backfilling to pipe trenches, chambers, etc. with earth filling obtained from the excavations and/or stock piles on site, compacted to 90% Mod AASHTO density	m ³	270	
10	Extra over ditto (earth filling obtained from the excavations and/or stock piles on site) for selecting suitable earth filling	m ³	43	
11	Selected granular filling in bedding under and filling around pipes	m ³	14	
12	Extra over bedding under and filling around pipes for suitable granular filling supplied by the contractor	m ³	14	
13	Unreinforced concrete (15MPa) bedding under pipes	m ³	1	
14	Unreinforced concrete (15MPa) encasing to horizontal pipe	m ³	1	
<u>Class 12 uPVC pressure pipes with spigot and socket joints to SANS 966-2003</u>				
15	110mm Pipe laid in trenches (trenches elsewhere)	m	200	
Carried to Collection			R	
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Water Supply To Fire Appliances				

		Unit	Quantity	Rate	Amount
<u>Extra over Class 12 uPVC pressure pipes for cast iron fittings</u>					
16	110mm 11.25 degree Bend	No	5		
17	110mm 22.5 degree Bend	No	5		
18	110mm 45 degree Bend	No	5		
19	110mm 90 degree Bend	No	15		
20	110mm End cap	No	1		
21	110mm Equal Tee	No	2		
22	110mm Saddle including nuts and bolts and drilling boss and pipe	No	4		
<u>Sundries</u>					
23	Precast concrete pipeline marker block size 200 x 200mm including lettering	No	20		
24	15Mpa Concrete encasement to pipes or thrustblocks including formwork, etc.	m ³	2		
<u>Galvanised steel pipes with screwed and flanged joints, including Wrapid Bond wrapping to underground fittings</u>					
References in the items below refer to the relevant details of the Fire Hydrant (FH) and Fire Booster Connection (FBC) as per attached engineers drawing numbers D102D and D102E					
25	80mm Hydrant tee on main pipeline, including connecting bolts, gaskets, etc.	No	4		
26	80mm Diameter G.I. feed pipe of average 1000mm long, with one end buttwelded to bend	No	4		
27	80mm Diameter 90 degree G.I. buttwelded long radius bend	No	4		
<u>METER AND VALVE CHAMBERS (CPAP WORK GROUP NO. 148)</u>					
References in the items below refer to the relevant details of meter and valve chambers attached to these bills of quantities					
Carried to Collection				R	
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Bill No. 5					
Water Supply To Fire Appliances					

		Unit	Quantity	Rate	Amount
	<u>Brick chambers for water meters, valves, etc.</u>				
28	Brick valve chamber 1935 x 800mm internally exceeding 1000mm and not exceeding 2000mm deep internally, comprising 150mm mesh reinforced (Ref 395) 25 Mpa concrete base, one brick wall to full height, 150mm thick rod reinforced 25 Mpa concrete cover slab, internal plaster and opening for and including 600mm diameter circular SABS 558 Type 2A cast iron cover and frame including all necessary excavations, backfilling, carting away surplus material, etc. all as per attached engineers drawing number D102B	No	1		
	<u>Water meters, valves and pipe fittings within and around the meter and valve chambers, all as per attached engineers drawing number D102B</u>				
29	Galvanised pipe size 100mm Diameter x 650mm long flanged pipe	No	1		
30	Galvanised pipe size 100mm Diameter x 893mm long flanged pipe	No	1		
31	100mm Diameter Cast Iron flange adaptor	No	1		
32	100/110mm Diameter Cast Iron flange adaptor	No	1		
33	100mm Diameter Viking Johnson or equally approved flanged adaptor	No	1		
34	100mm Diameter RSV left hand closing cast iron gate valve with flanged ends and cap top	No	1		
35	100mm Diameter swing type non-return valve with 16 bar operating pressure and with flanged ends	No	1		
	<u>FIRE HYDRANTS, ETC.</u>				
	<u>Fire Hydrants, etc.</u>				
36	80 x 65mm Woodlands type or equally approved brass right-angle hydrant valve with transition coupler, reducer bush, cap and chain	No	3		
37	100 x 80mm Woodlands type or equally approved brass double booster pump connection and Y-piece, with 80 x 15 bar pressure gauge, 100 x 80mm screwed bushing, caps and chains	No	1		
38	Supply of hydrant key	No	1		
	Carried to Collection				
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		Unit	Quantity	Rate	Amount
	<u>Fire hydrant pedestals</u>				
39	Reinforced concrete 25Mpa/19mm hydrant pedestal 700mm high cast around and including 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 attached engineers drawing number D102D	No	3		
40	Reinforced concrete 25Mpa/19mm booster pedestal 800mm high cast around and including vertical 80mm galvanised steel water 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 attached engineers drawing number D102E	No	1		
	<u>TESTING</u>				
	<u>Testing</u>				
41	Testing complete bulk fire pipe line system	Item			
Carried to Collection					R
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SECTION NO. 3

EXTERNAL WORKS

BILL NO. 5

WATER SUPPLY TO FIRE APPLIANCES

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	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>EXTERNAL WORKS</u>				
<u>BILL NO. 6</u>				
<u>SUBSOIL DRAINAGE</u>				
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				
<u>SUPPLEMENTARY PREAMBLES</u>				
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 and Engineer				
<u>SUBSOIL DRAINAGE (CPAP WORK GROUP NO. 146)</u>				
<u>Excavation, etc. for subsoil drainage</u>				
1				
Excavation in earth not exceeding 1m deep for pipe trenches, chambers, etc.	m ³	265		
2				
Excavation in earth exceeding 1m and not exceeding 2m deep for pipe trenches, chambers, etc.	m ³	104		
3				
Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock	m ³	75		
4				
Extra over excavation in earth for pipe trenches, chambers, etc for excavation in hard rock	m ³	40		
5				
Extra over excavation for pipe trenches, chambers, etc. for carting away surplus material to a dumping site to be located by the contractor	m ³	147		
6				
Risk of collapse of excavations to sides of trench and hole excavations not exceeding 1,5m deep	m ²	600		
7				
Risk of collapse of excavations to sides of trench and hole excavations exceeding 1,5m deep	m ²	874		
8				
Keeping excavations free of all water other than subterranean water	Item			
9				
Selected granular filling in bedding under and filling around pipes	m ³	221		
10				
Extra over bedding under and filling around pipes for suitable granular filling supplied by the contractor	m ³	147		
Carried to Collection			R	
Section No. 3				
Bill No. 6				
Subsoil Drainage				

		Unit	Quantity	Rate	Amount
	<u>Kaytech Flo-Drain system comprising Kaytech HDPE drainage core and perforated Kaytech Geopipes jointed with uPVC couplings all enclosed within Kaytech bidim nonwoven continuous filament needle-punched geotextile fabric, the fabric with 150mm side and end laps, as as per attached engineers drawing number D3A</u>				
11	Flownet 500 HP drainage core in geotextile filter jacket laid vertically	m ²	737		
12	M150 Geopipe enclosed in grade A3 geotextile filter fabric, including staple or wire binding	m	530		
	<u>Composite subsoil drainage</u>				
13	Composite sub soil drain size 300 x 700mm overall comprising 110mm perforated PVC geopipe laid inside 13mm washed concrete stone filling and entire drain wrapped in U2 Bidim and Kaytech A2, including excavations, carting away, etc.	m	100		
	<u>Megaflow MEG 315 Geocomposite Panel Drain System</u>				
14	315 x 40mm Drain system laid in trench below roadworks sub base layer including 50mm washed river sand bedding, excavations, carting away surplus materials, etc. all as per attached engineers drawing number D3D	m	630		
15	Extra over for Y-junction intersection wrapped with U24 Bidim with 300mm laps and nylon strappings	No	75		
	<u>Sundries</u>				
16	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.	No	10		
17	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	25		
18	100mm Polypropylene Y-junction with ring seal joints	No	10		
	Carried to Collection				
	Section No. 3				
	Bill No. 6				
	Subsoil Drainage				

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	Unit	Quantity	Rate	Amount
<u>SUMPS, CATCHPITS, INSPECTION CHAMBERS, ETC</u> <u>(CPAP WORK GROUP NO. 146)</u>				
References in the items below refer to the relevant details of sewer sumps, catchpits, inspection chambers, etc. attached to these bills of quantities				
<u>Sumps, catchpits, inspection chambers, etc.</u> <u>including concrete kerbs or precast concrete cover slabs</u>				
19				
Brick drainage junction box 1000mm x 1000mm internally and not exceeding 1000mm deep internally, comprising 100mm mesh reinforced (Ref 395) 25 Mpa concrete base, one brick wall to full height, 100mm thick rod reinforced 25 Mpa concrete cover slab, benching, internal plaster, etc. all as per attached engineers drawing number D3B	No	4		
Carried to Collection				R
Section No. 3				
Bill No. 6				
Subsoil Drainage				

Amount

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SUBSOIL DRAINAGE
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Section No. 3
Bill No. 6
Subsoil Drainage

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u>				
<u>EXTERNAL WORKS</u>				
<u>BILL NO. 7</u>				
<u>ROADS AND PARKING</u>				
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				
<u>SUPPLEMENTARY PREAMBLES</u>				
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 and Engineer				
<u>Carting away of excavated material</u>				
Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site				
<u>Testing of material and filling</u>				
Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series				
<u>ROADWORK, PARKING AREAS AND PAVING</u>				
<u>Excavation in earth not exceeding 2m deep</u>				
1		Over site between buildings, retaining walls, etc. to reduce levels and dispose in prescribed stock piles on site (Provisional)	m ³	200
<u>Extra over bulk excavation in earth for excavation in</u>				
2		Soft rock	m ³	20
3		Hard rock	m ³	10
<u>Extra over all excavations for loading, carting and dumping excavated material (no allowance made for increase in bulk)</u>				
4		Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m ³	200
<u>Keeping excavations free of water</u>				
5		Keeping excavations free of water other than subterranean water	Item	
Carried to Collection			R	
Section No. 3				
Bill No. 7				
Roads And Parking				

		Unit	Quantity	Rate	Amount
	<u>Construction joint (CJ)</u>				
17	8mm Jointex with tear off strip in plate dowel construction joint through concrete paving not exceeding 300mm high using a diamond dowel system comprising 115mm x 115mm x 6mm thick hot dipped galvanised plates at 450mm centres including bond breaking compound applied to dowels and all necessary formwork, temporary pegs, stays, supports, etc. all as per attached engineers drawing number D2A	m	620		
	<u>In-situ concrete stormwater channels finished smooth on all exposed surfaces and with angles rounded, cast in suitable lengths (not exceeding 3000mm), including all formwork, moulds, shallow excavation, filling and ramming, laying to falls, bedding and pointing, etc.</u>				
18	900mm Wide x 300mm thick in-situ mesh reinforced (Ref 245) 25 Mpa concrete open stormwater channel with 850 x 75mm deep V-shaped waterway formed in top, all as per attached engineers drawing number D2D	m	10		
19	1000mm Wide x 100mm thick 15 Mpa concrete run-on slab, all as per attached engineers drawing number D2D	m	10		
	<u>Precast concrete kerbing finished smooth on exposed surfaces, including bedding, jointing and pointing</u>				
20	150 x 250mm High half-battered kerbs (SANS 927 fig 4) with 100 x 100 x 250mm unreinforced 25 Mpa concrete haunching at back of each joint, including excavation, backfilling, etc.	m	360		
21	150 x 250mm High half-battered kerbs (SANS 927 fig 4) with 100 x 100 x 250mm unreinforced 25 Mpa concrete haunching at back of each joint, circular on plan exceeding 4m radius, formed with straight kerbs, including excavation, backfilling, etc.	m	60		
22	150 x 250mm High half-battered kerbs (SANS 927 fig 4) with 100 x 100 x 250mm unreinforced 25 Mpa concrete haunching at back of each joint, circular on plan not exceeding 4m radius, formed with straight kerbs, including excavation, backfilling, etc.	m	25		
	<u>Sikaflex Pro-3WF polyurethane sealing compound including polyethylene backing cord, bond breaker, primer, etc.</u>				
23	8 x 10mm In construction joints, including raking out expansion joint filler as necessary	m	620		
24	10 x 10mm In saw cut joints	m	375		
	Carried to Collection				
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	Roads And Parking				

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		Unit	Quantity	Rate	Amount
	<u>GUARDRAILS, ETC.</u>				
	<u>Guardrails, etc</u>				
39	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 attached engineers drawing number DC-CI-WD-3005	m	17		
40	Extra over for bullnose, all as per attached engineers drawing number DC-CI-WD-3005	No	4		
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BILL NO. 7
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Section No. 3
Bill No. 7
Roads And Parking

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 3</u> <u>EXTERNAL WORKS</u> <u>BILL NO. 8</u> <u>BUILDERS WORK FOR NOMINATED INSTALLATIONS</u>				
<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> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <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 and Engineer</p> <p><u>Bill descriptions</u></p> <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> <p><u>DUCTS FOR ELECTRICAL AND TELEPHONE CABLES, ETC.</u></p> <p><u>Class 9 HDPE pipes to SANS ISO 4427</u></p>				
1				
Supply, lay, bed and prove 160mm diameter sleeve pipes with and including 1mm x 16mm Optex Pull tape, laid in and including trenches not exceeding 2m deep, including all excavations, bedding, backfilling with selected material, carting away surplus material, compacting to required density, fittings, welding, etc., complete		m	990	
<p><u>Class 6 uPVC to SANS 966-2003</u></p>				
2				
Supply, lay, bed and prove 50mm diameter sleeve pipes with and including 1mm x 16mm Optex pull tape, laid in and including trenches not exceeding 2m deep, including all excavations, bedding, backfilling with selected material, carting away surplus material, compacting to required density, fittings, etc., complete		m	40	
Carried to Collection			R	
Section No. 3				
Bill No. 8				
Builders Work For Nominated Installations				

		Unit	Quantity	Rate	Amount
3	Supply, lay, bed and prove 110mm diameter sleeve pipes with and including 1mm x 16mm Optex pull tape, laid in and including trenches not exceeding 2m deep, including all excavations, bedding, backfilling with selected material, carting away surplus material, compacting to required density, fittings, etc., complete	m	60		
4	Supply, lay, bed and prove 160mm diameter sleeve pipes with and including 1mm x 16mm Optex pull tape, laid in and including trenches not exceeding 2m deep, including all excavations, bedding, backfilling with selected material, carting away surplus material, compacting to required density, fittings, etc., complete	m	1 050		
	<u>Extra over Class 6 uPVC pipes for fittings</u>				
5	50mm 90° Long radius bend	No	4		
6	110mm 90° Long radius bend	No	4		
7	160mm 90° Long radius bend	No	6		
	<u>MANHOLES, INSPECTION CHAMBERS, ETC (CPAP WORK GROUP NO. 146)</u>				
	References in the items below refer to the relevant details of inspection chambers, etc. attached to these bills of quantities				
	<u>Manholes, mini-sub plinths, etc.</u>				
8	Insitu concrete sleeve tank for undersea cable overall size 4780 x 1810mm wide comprising two chambers, the first chamber 2750mm x 1370mm x 1910mm internally and the second chamber 1370mm x 1370mm x 1910mm internally, comprising 440mm rod reinforced 30 Mpa shaped concrete base, 220mm thick rod reinforced 30 Mpa concrete walls and cover slab, internal plaster, benching and openings for and including 2 x SABS 558 Type 2A cast iron manhole cover and modified frame complete including all excavations, backfilling, carting away surplus material, formwork, reinforcement, etc. all as per attached engineers drawing number D3E	No	2		
9	Brick manhole chamber 1200mm x 1200mm internally not exceeding 1000mm deep internally, comprising 150mm mesh reinforced (Ref 395) 25 Mpa concrete base, one brick wall to full height, 200mm thick rod reinforced 25 Mpa concrete cover slab, internal plaster and opening for and including 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 attached engineers drawing number E110A	No	7		
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		Unit	Quantity	Rate	Amount
10	Brick manhole chamber 700mm x 700mm internally not exceeding 1000mm deep internally, comprising 150mm mesh reinforced (Ref 395) 25 Mpa concrete base, one brick wall to full height, 200mm thick rod reinforced 25 Mpa concrete cover slab, internal plaster and opening for and including 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 attached engineers drawing number E110B	No	4		
11	Brick manhole chamber 600mm x 600mm internally not exceeding 1000mm deep internally, comprising 150mm mesh reinforced (Ref 395) 25 Mpa concrete base, one brick wall to full height, 200mm thick rod reinforced 25 Mpa concrete cover slab, internal plaster and opening for and including 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 attached engineers drawing number E110B	No	2		
12	Brick minisub chamber overall size 3340 x 1460mm wide comprising two chambers, the first chamber 1100mm x 800mm x 1025mm internally and the second chamber 1350mm x 800mm x 1025mm internally, comprising 150mm rod reinforced 25 Mpa concrete base, one brick wall to full height plastered both sides and benching including all excavations, backfilling, carting away surplus material, reinforcement, etc. all as per attached engineers drawing number E101C	No	1		
	<u>Sundries</u>				
13	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock	m ³	25		
14	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in hard rock	m ³	10		
15	Extra over excavation for pipe trenches, chambers, etc for carting away surplus material to a dumping site to be located by the Contractor	m ³	486		
16	Extra over backfilling to drain trenches, chambers, etc for approved earth backfilling supplied by the Contractor	m ³	486		
17	Unreinforced 15Mpa mass concrete encasing to horizontal pipe	m ³	2		
	Carried to Collection				
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	Builders Work For Nominated Installations				

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		Unit	Quantity	Rate	Amount
18	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	10		
19	Cable painted kerb marker	No	5		
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BILL NO. 8

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Builders Work For Nominated Installations

	Unit	Quantity	Rate	Amount
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<u>EXTERNAL WORKS</u>				
<u>BILL NO. 9</u>				
<u>FENCING</u>				
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				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>National treasury designated sectors instruction number 15 of 2016/2017</u>				
Only locally produced or locally manufactured steel products and components for construction with a stipulated minimum threshold of 100 percent for local production and content will be considered in accordance with National treasury designated sectors				
<u>General</u>				
1. All fencing components are to be hot-dip galvanised after manufacture				
2. Flatwrap wire to comply with CKS 592				
3. Flatwrap wire and clips to be "Aluzink" coated				
4. Price must include for steps in fencing				
5. Sole plates and portions of posts and stays embedded in ground shall be coated with bitumen.				
<u>FENCING</u>				
<u>EXCAVATION OTHER THAN BULK</u>				
<u>Excavation in earth not exceeding 2m deep</u>				
1	Trenches	m ³	13	
<u>Extra over excavations other than bulk in earth for excavation in</u>				
2	Soft rock	m ³	1	
3	Hard rock	m ³	1	
<u>EXCAVATIONS ETC</u>				
<u>Back excavation of vertical sides of excavations in earth for working space including backfilling compacted to 93% Mod AASHTO density</u>				
4	Not exceeding 500mm deep for placing and removing formwork to walls etc, against excavated face	m ²	65	
Carried to Collection			R	
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Bill No. 9				
Fencing				

		Unit	Quantity	Rate	Amount
	CARTING AWAY				
	<u>Extra aver all excavations for loading, carting away and dumping surplus excavated material (no allowance made for increase in bulk)</u>				
5	Off site to a dumping site located by the contractor	m ³	13		
	<u>UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES</u>				
	<u>20Mpa/19mm Stone concrete</u>				
6	Strip under fence line	m ³	13		
	<u>FINISHING TOP SURFACE OF CONCRETE</u>				
	<u>Finishing top surfaces of concrete smooth with a wood float</u>				
7	Sloping and slayed tops of beams, walls, etc.	m ²	130		
	<u>TEST BLOCKS</u>				
	<u>Test blocks</u>				
8	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes	Sets	2		
	<u>ROUGH FORMWORK (DEGREE OF ACCURACY II)</u>				
	<u>Rough Formwork to Sides</u>				
9	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	650		
	<u>HOT DIPPED GALVANIZED SECURITY FENCING</u>				
	<u>Hot dipped galvanized palisade fencing</u>				
10	Palisade fence 2400mm high comprising of 2,35m high 40 x 40 x 3mm angle iron spear head profile pales at maximum 180mm centres (16 per 3m section) in nominal panel size 3000m wide, with centre pale 2,7m high 40 x 40 x 3mm angle, secured to and including 76 x 4,0mm SHS hot dip galvanised posts at 3m centres (SABS 121, ISO 1461 1999 specification) after welding of fish tail brackets to posts to receive rails with top of post capped and seam welded and ground smooth prior to galvanizing 8mm drainage hole,				
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Fencing

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SECTION NO. 4
OHS AND COVID-19

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 4</u>				
<u>OHS AND COVID-19</u>				
<u>BILL NO. 1</u>				
<u>OHS AND COVID 19</u>				
<u>TRADE PREAMBLES</u>				
<u>Trade Preambles</u>				
For Trade Preambles refer to 'Model Preambles for Trades' (2008 edition) for the full descriptions of material to be used and work to be done in this Bill				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Supplementary Preambles</u>				
Where items in this Bill are identical to those in the previous Bills, the descriptions have been shortened, and the full descriptions in the Trades concerned are to be referred to for the full meaning and intent each item				
Prior to pricing the Principal Contractor must familiarize him/herself with the Occupational Health and Safety Act No. 85 Of 1993, Construction Regulations 2014, Covid 19 and any other relevant Regulations and Standards as well as project specific Health & Safety specifications				
The quantities contained herein serve as a guideline only to determine if the contractor has sufficiently priced for the Health and Safety obligations and demands of the Occupational Health and Safety Act No. 85 Of 1993, Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health & Safety specifications. Where quantities are missing the contractor is to insert his own quantities based on his individual requirements to comply with the Health and Safety obligations and demands of the Occupational Health and Safety Act No. 85 Of 1993, Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health & Safety specifications				
All Costs to comply with the obligations and demands of the Occupational Health and Safety Act No. 85 Of 1993, Construction Regulations 2014, Covid 19 regulations and any other other relevant Regulations and Standards as well as project specific Health & Safety Specifications not listed or mentioned below must be priced in Preliminaries Section of the Bills of Quantities ' Clause 7,2 Health and Safety and Covid 19' no additional claims in respect of compliance with the above mentioned will be considered				
Carried to Collection			R	
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Ohs And Covid 19				

		Unit	Quantity	Rate	Amount
<u>OCCUPATIONAL HEALTH AND SAFETY</u>					
<u>Full time safety officer and COVID-19 Compliance Officer</u>					
1	Full time attendance on site of a SACPCMP-registered construction health and safety officer or manager from the start of construction until the end of project handover. The full time construction health and safety officer shall also be responsible for management of COVID 19 compliance	Months	9		
<u>General</u>					
2	First aiders and first aid kits	Item			
3	Medical certificates of fitness Medical examination of all employees and certification of fitness by an occupational medicine practitioner. Pre-employment, annual and exit medical examination is required	Item			
4	Emergency Equipment based on the risk exposure and emergency rescue. stretchers, neck brace, spill kits, lifting and lowering hosting equipment of the injured	Lump Sum			
5	Competent inspectors for equipment such as examples scaffolding inspectors and lifting machine inspector	Lump Sum			
6	Mandatory training such as risk assessments, legal liability/OHS Act, incident investigation	Lump Sum			
7	Provide, supply and maintenance for each worker the following SANS approved personal protective equipment & clothing as per the site-specific risk assessments: • Hard Hats • Overall/work suit (100% Cotton) • Safety boots/shoes (Steel-Toe) • Safety gumboots (Steel-Toe) • Ear Plugs/Muffs • Dust Mask(at least FF2 type) • Respirators • Safety goggles • Hand gloves •Reflector vests • Other	Item			
8	Barricading and hoarding for fall arrest, SANS approved safety netting (orange color with minimum of 1,2 meters high)	Lump Sum			
9	Waste bins on site and regular removal	Item			
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	Unit	Quantity	Rate	Amount
<u>Cost of medical certificates and medical surveillance</u>				
22	(a) Initial (baseline) medical examinations (quantity to be aligned with risk assessment and scaling in employment)	Item		
23	(b) Periodic and exit examinations (quantity to be aligned with risk assessment and scaling in employment)	Item		
<u>Education & Training</u>				
24	Initial COVID-19 training (quantity to be aligned with risk assessment and scaling in employment)	Item		
25	Weekly COVID-19 toolbox talks	Months	9	
<u>Facilities and equipment</u>				
26	(a) Separate office (16m2) with windows and a door for use by COVID-19 Compliance Officer including electricity connection and supply	No	1	
27	(b) Provision and upkeep of infrared handheld thermometer	No	3	
<u>Supply and fix COVID-19 signs</u>				
28	Hand Hygiene (800 x 800mm)	No	4	
29	Sanitisation Station (297 x 400mm)	No	4	
30	Face Mask (297 x 420mm)	No	4	
31	Social Distancing (400 x 400mm)	No	4	
32	Prevention Tips (297 x 420mm)	No	4	
<u>Cleaning materials and hand sanitizers</u>				
33	Monthly disinfection of facilities	Months	9	
34	Supply and upkeep of hand sanitizer dispensers and consumables (paper towel)	Months	9	
<u>ENVIRONMENTAL</u>				
<u>Environmental</u>				
35	Provide for adequate handling and storage of materials so as to minimize contamination of ground, air or water	Item		
36	Provide for the adequate and safe collection and disposal of waste material from site by an approved method	Item		
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		Unit	Quantity	Rate	Amount
37	Provide for rehabilitation on completion of site areas and temporary access routes not covered by construction or landscaping specifications. i.e. grass seeding/hydro seeding, maintenance of alien vegetation	Item			
38	Provide for stockpiling of topsoil for re-use	Item			
39	Provide for a responsible person to prepare and update Method Statements, conduct regular inspections, maintain records, and report to the Principal Agent	Item			
<u>COMPULSORY BREAKDOWN FOR THE ADJUSTMENT OF OHS AND COVID 19 REQUIREMENTS</u>					
<u>Compulsory breakdown for the adjustment of OHS and Covid 19 requirements</u>					
Value related (R_____)					
Fixed related (R_____)					
Time related (R_____)					
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SECTION NO. 5
PROVISIONAL SUMS

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>PROVISIONAL SUMS</u>				
<u>BILL NO. 1</u>				
<u>PROVISIONAL SUMS</u>				
<u>PROVISIONAL SUMS</u>				
<u>The following Selected Sub-Contract amounts are for work to be carried out by Selected Sub-Contractors in terms of clause 21 of the Principal Building Agreement</u>				
<u>ELECTRICAL INSTALLATION</u>				
<u>Electrical installation</u>				
1				
Provide the amount of R 4 500 000.00 (Four Million Five Hundred Thousand Rands) for Electrical Installation	Item			4 500 000 00
2				
Profit on above item	Item			
3				
Attendance on ditto	Item			
<u>AIR CONDITIONING</u>				
<u>Air conditioning</u>				
4				
Provide the sum of R 2 000 000.00 (Two Million Rands) for Air Conditioning Installation	Item			2 000 000 00
5				
Profit on above item	Item			
6				
Attendance on ditto	Item			
<u>FIRE PROTECTION</u>				
<u>Fire Protection</u>				
7				
Provide the amount of R 850 000.00 (Eight Hundred and Fifty Thousand Rands) for Fire Protection Installation	Item			850 000 00
8				
Profit on above item	Item			
9				
Attendance on ditto	Item			
<u>FIRE DETECTION INSTALLATION</u>				
<u>Fire detection installation</u>				
10				
Provide the amount of R 650 000.00 (Six Hundred and Fifty Thousand Rands) for Fire Detection Installation	Item			650 000 00
11				
Profit on above item	Item			
12				
Attendance on ditto	Item			
Carried to Collection			R	
Section No. 5				
Bill No. 1				
Provisional Sums				

		Unit	Quantity	Rate	Amount
<u>FOUNDATION PILING</u>					
<u>Foundation piling</u>					
13	Provide the amount of R 430 000.00 (Four Hundred and Thirty Thousand Rands) as a possible extra over cost in foundations for Piling	Item			430 000 00
14	Profit on above item	Item			
15	Attendance on ditto	Item			
<u>SOLAR SHADING</u>					
<u>Solar shading</u>					
16	Provide the amount of R 120 000.00 (One Hundred and Twenty Thousand Rands) for aluminium louvres in Solar Shading Installation	Item			120 000 00
17	Profit on above item	Item			
18	Attendance on ditto	Item			
<u>SPECIALIST WALL CLADDING</u>					
<u>Specialist wall cladding</u>					
19	Provide the amount of R 150 000.00 (One Hundred and Fifty Thousand Rands) for lazer cut mild steel and Di Bond Specialist Wall Cladding	Item			150 000 00
20	Profit on above item	Item			
21	Attendance on ditto	Item			
<u>LANDSCAPING</u>					
<u>Landscaping</u>					
22	Provide the amount of R 50 000.00 (Fifty Thousand Rands) for Landscaping	Item			50 000 00
23	Profit on above item	Item			
24	Attendance on ditto	Item			
<u>SIGNAGE</u>					
<u>Signage</u>					
25	Provide the amount of R 25 000.00 (Twenty Five Thousand Rands) for Signage	Item			25 000 00
26	Profit on above item	Item			
27	Attendance on ditto	Item			
Carried to Collection				R	
Section No. 5					
Bill No. 1					
Provisional Sums					

		Unit	Quantity	Rate	Amount
<u>BULK WATER AND FIRE MAIN CONNECTION</u>					
<u>Bulk water connection</u>					
28	Provide the sum of R50 000-00 (Fifty Thousand Rands) for a Bulk Water Connection	Item			50 000 00
29	Allow for profit	Item			
30	Allow for attendance	Item			
Carried to Collection				R	
Section No. 5					
Bill No. 1					
Provisional Sums					

SECTION NO. 5
PROVISIONAL SUMS
BILL NO. 1
PROVISIONAL SUMS
COLLECTION

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Section No. 5
Bill No. 1
Provisional Sums

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>PROVISIONAL SUMS</u>				
<u>BILL NO. 2</u>				
<u>BUDGETARY ALLOWANCES</u>				
<u>BUDGETARY ALLOWANCES</u>				
<u>The following budgetary allowances are for work to be executed by the Contractor to be measured out and priced at Billed rates if constructed, or to be omitted from the Contract depending on the Employers requirements</u>				
1				
Provide the amount of R 350 000.00 (Three Hundred and Fifty Thousand Rands) for future builders work to be designed	Item			350 000 00
2				
Provide the amount of R 50 000.00 (Fifty Thousand Rands) for bulkheads	Item			50 000 00
3				
Provide the amount of R 120 000.00 (One Hundred and Twenty Thousand Rands) for planters and dwarf walls	Item			120 000 00
Carried To Section Summary				R
Section No. 5				
Bill No. 2				
Budgetary Allowances				

	Unit	Quantity	Rate	Amount
<u>SECTION NO. 5</u>				
<u>PROVISIONAL SUMS</u>				
<u>BILL NO. 3</u>				
<u>CONTINGENCY, CPAP, ETC.</u>				
<u>MONETARY ALLOWANCES</u>				
The following monetary provisions are to be omitted from the contract sum and used as directed below				
<u>Contingencies</u>				
1				
Provide the sum of R 2 000 000.00 (Two Million Rands) for Contingencies and design contingency, to be used as instructed by the Architect in terms of clause 17 of the Principal Building Agreement, which amount shall be expended at the sole discretion of the Client				
	Item			2 000 000 00
<u>Statutory Increases</u>				
2				
Provide the amount of R 1 200 000.00 (One Million Two Hundred Thousand Rands) for CPAP to used in terms of clause 32.13 of the Principal Building Agreement				
	Item			1 200 000 00
Carried To Section Summary				R
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Bill No. 3				
Contingency, Cpap, Etc.				

Amount

SECTION NO. 5

PROVISIONAL SUMS

SECTION SUMMARY

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SubTotal excluding Value Added Tax

ADD VAT @ 15%:

Carried to Tender

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C2.3 SCHEDULE FOR IMPORTED MATERIALS AND EQUIPMENT

Tenderer ____ Witness 1 ____ Witness 2 ____ Employer ____ Witness 1 ____ Witness 2 ____

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

Project title:	DATA CENTRE FACILITY (MEET-ME-ROOM) IN ZONE 1A OF THE ELIDZ
Tender no:	ES/MEET/07/20/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: $A = V \times \left(\frac{Z}{Y} - 1\right)$

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.

SIGNED FOR THE TENDERER:	 NAME OF TENDERER
..... SIGNATURE: TENDERER	 SIGNATURE: WITNESS 1
NAME:		NAME:
CAPACITY: SIGNATURE: WITNESS 2
DATE:		NAME:

Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

C2.4: GUARANTOR PROFORMA LETTER OF INTENT

Tenderer ____ Witness 1 ____ Witness 2 ____ Employer ____ Witness 1 ____ Witness 2 ____

C2.4: Guarantor Proforma Letter of Intent

**DATA CENTRE FACILITY (MEET-ME-ROOM) IN ZONE 1A OF THE ELIDZ
TENDER No. ES/MEET/07/20/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: Ms N. Boya

Dear Madam,

**ELIDZ: DATA CENTRE FACILITY (MEET-ME-ROOM) IN ZONE 1A OF THE ELIDZ
TENDER No. ES/MEET/07/20/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 Extensions to existing Manufacturing Facility IN ZONE 1A OF THE ELIDZ.

Yours faithfully,

.....
Guarantor

Tenderer ____ Witness 1 ____ Witness 2 ____ Employer ____ Witness 1 ____ Witness 2 ____

C2.5: CONTRACT DATA CE

Tenderer ____ Witness 1 ____ Witness 2 ____ Employer ____ Witness 1 ____ Witness 2 ____

Part 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>Definitions</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>Provision of Contract Data</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>Reference Clauses</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:		

Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

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 [14.5]	Advanced Payment is required. Where "Yes"	(Amount)	
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"> • The amount for preliminaries • Any contingency sum • Any amount in respect of CPAP • All inclusive of tax 		
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"> • An initial or establishment charge • A monthly charge • A final or disestablishment charge • All inclusive of tax In arriving at such a division cognizance shall be taken of such factors as: <ul style="list-style-type: none"> • Premiums for annually renewable insurance policies • 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 • 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 • 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. 		
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		

Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

	<p>the contractor's tender.</p> <p>For the adjustment of preliminaries both the contract sum and the contract value shall exclude:</p> <ul style="list-style-type: none"> • The amount of the preliminaries • Any contingency sum • Any amount in respect of CPAP • Dayworks • All inclusive of tax
3.2.1	<p>Option A</p> <p>The amount of preliminaries shall be adjusted in the following categories:</p> <ul style="list-style-type: none"> • An amount which shall not be varied • An amount which shall be varied in proportion to the contract value as compared with the contract sum • 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 the contract value in terms of the agreement. • 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. <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"> • 10% (ten percent) which amount shall not be varied • 15% (fifteen percent) which amount shall be varied in proportion to the contract value as compared to the contract sum • 75% (seventy percent) which amount shall be varied in proportion to the construction period as compared with the initial construction period <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"> • Any contingency sum • Any amount in respect of CPAP • All inclusive of tax <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>
3.2.2	<p>Option B</p> <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</p>

Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

	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		
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		
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

Tenderer ____ Witness 1 ____ Witness 2 ____ Employer ____ Witness 1 ____ Witness 2 ____

C2.6: Form of Offer and Acceptance

Project title:	DATA CENTRE FACILITY (MEET-ME-ROOM) IN ZONE 1A OF THE ELIDZ
Contract No:	ES/MEET/07/20/Z1A

A. OFFER

The Employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of: **DATA CENTRE FACILITY (MEET-ME-ROOM) 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:	Note: 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.
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:

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.

DOMICILIUM CITANDI ET EXECUTANDI:

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:

Other Contact Details of the Tenderer are:

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

Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

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

Name of Organisation:	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

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%20development/ip.jsp) at no cost.

Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

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	
-----	--	----	--

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.

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	
-----	--	----	--

- 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.

Tenderer _____ Witness 1 _____ Witness 2 _____ Employer _____ Witness 1 _____ Witness 2 _____

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: _____

C2.9: Tender Drawings

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 Apportioned to the 30%	Percentage Goal Tendered	Estimated Rand Value (R) Including VAT
Grade 1-2	R1 000 000	1%	%	R
Grade 3	R 3 000 000	1%	%	R
Grade 4	R 6 000 000	3%	%	R
Grade 5	R 10 000 000	5%	%	R
Grade 6	R 20 000 000	6%	%	R
Grade 7	R 60 000 000	14%	%	R
Total % SMME Goal Tendered ⁽¹⁾		30%	%	R

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	R
SMME Value Including VAT	R
Percentage of SMME to Tender Amount ⁽¹⁾	%

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

SIGNED FOR THE TENDERER: NAME OF TENDERER
..... SIGNATURE: TENDERER SIGNATURE: WITNESS 1
NAME:	NAME:
CAPACITY: SIGNATURE: WITNESS 2
DATE:	NAME:

Tenderer ____ Witness 1 ____ Witness 2 ____ Employer ____ Witness 1 ____ Witness 2 ____