

INDEPENDENT DEVELOPMENT TRUST

BILL OF QUANTITIES (BOQ)

THE DEMOLITION OF 112 PREFAB HOUSES (INCLUDING HOUSES UNDER THE ESKOM SERVITUDE) AND ERECTING OF 113 THREE BEDROOM BRICK HOUSES.

VOLUME 2 OF 3

BID DOCUMENT

Bid No.: DPWI01WCAN001-DB_CON001-CONTRACTOR

BIDDER'S INFORMATION (Must be completed by Bidder)

Company Name	
Contact Person	
Cell / Tel Number	
Fax Number	
E-mail Address	
CSD Number	

ADVERT DATE: 16 SEPTEMBER 2025

PREPARED FOR:

THE INDEPENDENT DEVELOPMENT TRUST

IDT Western Cape Regional Office 14th
Floor, Customs House Heerengracht
Street, Foreshore, Cape Town, 8001

CLOSING DATE AND TIME: 15 OCTOBER 2025, 12H00

Enquiries Email Address: dpwi01wcan-tenders@idt.org.za;

Bid Document to Procure a design and build contractor. This document contains the Term of Reference, the Bid Data, the Returnable Documents, the Special Condition of Bid and the Contract Data.

**NOTE: THE TWO ENVELOPE PROCEDURE WILL BE FOLLOWED FOR THIS TENDER
NON-COMPLIANCE WILL RENDER YOUR TENDER INVALID**

ACACIA PARK
DEMOLITION OF 113 ACCOMODATION STRUCTURES
CONSTRUCTION OF REPLACEMENT ACCOMODATION &
ASSOCIATED INFRASTRUCTURE

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 1 - PRELIMINARIES AND GENERAL</u></p> <p><u>BILL NO. 1 - SCHEDULED ESTABLISHMENT, OVERHEADS & INCIDENTAL COSTS</u></p> <p><u>(CPAP WORK GROUP 190 UNLESS OTHERWISE STATED)</u></p> <p><u>PRICING INSTRUCTIONS TO TENDERS</u></p> <p>Any items not priced are deemed to be included.</p> <p>The rates and prices for completing an item scheduled in this section for establishment, overheads and incidental costs include everything to cover the Contractor's direct costs, overheads, profit and expenses required for all risks, liabilities and obligations in terms of this contract.</p> <p>PLEASE NOTE: The Contractor hereby agrees that the rates in this section will be used for compensation event cost calculation and pricing where applicable instead of Defined Cost, unless otherwise decided by the Employer, at the Employer's sole discretion. Lump sum prices in this section are fixed for the contract, and are not subject to adjustment in compensation event assessments.</p> <p>All the items scheduled in this section must be priced. In the absence of a price against any item, no claim for additional costs or charges for provision of any of the duties, services, facilities or obligations required in respect of that item will be considered.</p> <p><u>ONCE-OFF ESTABLISHMENT COST</u></p> <p>Claimable for payment upon completion of all related activities associated with each item</p>			
	Carried Forward		R	
	<p>Preliminaries and General</p> <p>Bill No.1 - Preliminaries and General (NEC4)</p>			

ACACIA PARK
DEMOLITION OF 113 ACCOMODATION STRUCTURES
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	Brought Forward		R
	<u>Contractual Requirements</u>		
1	Compliance with all clauses of the Contract and Works Information	Item	
2	Compliance with the law, regulations and by laws	Item	
3	Compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory	Item	
4	Compliance with the stipulations of the Environmental Specification	Item	
5	Insurance and liabilities	Item	
6	Performance bond	Item	
	<u>Establish Facilities on the Site</u>		
	<u>Facilities for Project Manager</u>		
7	Air conditioned office accommodation with suitable tables and chairs for meetings to be held on the site	Item	
8	Contract name board	Item	
	<u>Facilities for Contractor</u>		
9	Offices (shared with Project Manager)	Item	
10	Workshops	Item	
11	Laboratories	Item	
12	Ablutions and latrine facilities	Item	
13	Tools and equipment	Item	
14	Water supply	Item	
15	Electricity supply	Item	
16	Communication	Item	
	Carried Forward		R
	Preliminaries and General Bill No.1 - Preliminaries and General (NEC4)		

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	Brought Forward		R
	<u>DE-ESTABLISHMENT COST</u>		
17	Costs for complete removal of site establishment and restoration of the site to the Project Mangers satisfaction at the end of the contract:	Item	
	<u>ONGOING OPERATIONAL AND OVERHEAD COST</u>		
	Claimable for payment as a time-related cost during execution of the contract		
	<u>Contractual Requirements</u>		
18	Compliance with all clauses of the Contract and Works Information	wks	
19	Compliance with the law, regulations and by laws	wks	
20	Compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory	wks	
21	Compliance with the stipulations of the Environmental Specification	wks	
22	Insurance and liabilities	wks	
23	Performance bond	wks	
24	Facilities for Project Manager	wks	
25	Air conditioned office accommodation with suitable tables and chairs for meetings to be held on the site	wks	
26	Contract name board	wks	
27	Facilities for Contractor	wks	
28	Offices (shared with Project Manager)	wks	
29	Workshops	wks	
30	Laboratories	wks	
	Carried Forward		R
	Preliminaries and General Bill No.1 - Preliminaries and General (NEC4)		

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	Brought Forward		R
31	Ablutions and latrine facilities	wks	
32	Tools and equipment	wks	
33	Water supply	wks	
34	Electricity supply	wks	
35	Communication	wks	
36	Other	wks	
37	Company and head office costs	wks	
38	Provide the sum of R280 000,00 (Two Hundred And Eighty Thousand Rand) for the community liaison officer for the construction period of 31 months		SUM
	<u>INCIDENTAL EXPENDITURE PROVISIONS</u>		
	<u>Plant and Equipment</u>		
	<u>Scaffolding</u>		
39	Providing and erecting on site conventional steel access scaffolding to reach any place of work on the internal side or external facade of the building including approaches, extensions, working platforms, ladders, lifting tackle for men and materials etc. all complete as determined and required by the contractor in accordance with the proposed phasing plan. All in accordance with the relevant SANS codes and the latest South African health and safety regulations for working at heights	wks	
40	Maintaining and moving all conventional steel access scaffolding on site	wks	
41	Dismantling and taking away all conventional steel access scaffolding towers after the completion of proposed work etc. all complete	wks	
	Carried Forward		R
	Preliminaries and General Bill No.1 - Preliminaries and General (NEC4)		

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Brought Forward		R
<u>The quantities listed are included for tender evaluation purposes only, and do not reflect actual quantities envisaged for the project. The rates offered shall apply for compensation event pricing for the duration of the contract where applicable</u>		
<u>Plant</u>		
42	TLB (4x4) (wet rate) Hrs	
43	TLB (4x4) (standing rate) Hrs	
44	Tracker excavator (20 tons) (wet rate) Hrs	
45	Tracker excavator (20 tons) (standing rate) Hrs	
46	Front-end loader (2m ³ minimum bucket size) (wet rate) Hrs	
47	Front-end loader (2m ³ minimum bucket size) (standing rate) Hrs	
48	Water cart (9000 litres) (wet rate) Hrs	
49	Water cart (9000 litres) (standing rate) Hrs	
50	Self-propelled vibrating roller (12 tons) (wet rate) Hrs	
51	Self-propelled vibrating roller (12 tons) (standing rate) Hrs	
52	Vibrating plate compactor (wet rate) Hrs	
53	Vibrating plate compactor (standing rate) Hrs	
54	Rammer (wet rate) Hrs	
55	Rammer (standing rate) Hrs	
56	Tipper truck (7 tons) (wet rate) Hrs	
57	Tipper truck (7 tons) (standing rate) Hrs	
58	Tipper truck (8 tons) (wet rate) Hrs	
59	Tipper truck (8 tons) (standing rate) Hrs	
Carried Forward		R
Preliminaries and General Bill No.1 - Preliminaries and General (NEC4)		

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	Brought Forward		R
60	Tipper truck (10 tons) (wet rate) Hrs		
61	Tipper truck (10 tons) (standing rate) Hrs		
62	LDV (1 ton) KMS		
	<u>People</u>		
	All compensation event costs related to people are allocated according to the breakdown of categories below (or nearest matching category, if no exact description match). The following rate adjustments will apply for after hours work: Weekdays after hours and Saturdays - Rate X 1.5 Sundays and Public Holidays - Rate X 2		
63	Contract/Project Manager DAY		
64	Site Manager DAY		
65	Safety Officer DAY		
66	Registered Professional (QS, Eng, Arch) DAY		
67	Registered Technologist DAY		
68	Registered Technician DAY		
69	Site Foreman (General Supervisor) DAY		
70	Foreman (Supervisor) DAY		
71	Administrative clerk DAY		
72	Journeyman (Messenger) DAY		
73	Registered Electrician DAY		
74	Electrician assistant DAY		
75	Registered Plumber DAY		
76	Skilled Labourer (Artisan) DAY		
77	Unskilled Labourer DAY		
	Carried Forward to Summary of Section No. 1		R
	Preliminaries and General		
	Bill No.1 - Preliminaries and General (NEC4)		

**ACACIA PARK
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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 1 - PRELIMINARIES AND GENERAL</u>			
	<u>BILL NO. 3 - EPWP & NATIONAL YOUTH SERVICE REQUIREMENTS</u>			
	<u>PREAMBLES</u>			
	Tenderers are advised to study the Additional Specification SL: Employment and Training of Labour on the Expanded Public Works Programme (EPWP) Infrastructure Projects: National Youth Service, as bound elsewhere in the Bills of Quantities, and then price this Bill accordingly (SL 06.01)			
	<u>TRAINING OF YOUTH WORKERS</u>			
	<u>(TARGET: 141 YOUTH WORKERS)</u>			
	<u>Orientation, Life skills development and technical training:</u>			
1	Orientation and Life skills development training for an average of 10 days and a Technical Training skills for an average of 107 days per youth worker (ref. SL 09.01.01 and ref. SL 09.01.02).	PS		3,728,179.40
2	Provide Medical Surveillance	PS		70,276.71
	Payment Reduction due to not meeting the training target. Refer to Part B: Amendments to the Standard Conditions of Contract Clause 25.8 for calculation formula.			
	Youth Worker R 2 500			
3	Profit and attendance on condition that services and cost has been incurred (on items 200.01.01 and 200.01.02 above) (ref. SL 011)	%		
	Carried Forward		R	
	Preliminaries and General Bill No.3 - EPWP			

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	Brought Forward		R
	<u>EMPLOYMENT OF YOUTH WORKERS AND TRAVELLING DURING THE ON SITE TRAINING</u>		
4	<p>Employment of youth workers (Ref. SL 012 and Ref. SL 013)</p> <p>The unit of measurement shall be the number of youth workers at the labour rate of R126.28 per day on Training as per EPWP Ministerial Determination multiplied by the period employed in months and the rate tendered shall include full compensation for all costs associated with the employment of youth workers and for complying with the conditions of contract. The cost for the training shall be excluded from this item. This item is based on 12 months appointment for youth workers. The travelling is based on R63 per day return trip/youth worker.</p>	PS	7,036,801.22
5	<p>Profit and attendance on condition that services and cost has been incurred (Ref. SL 011)</p> <p><u>PROVISION OF EPWP DESIGNED OVERALLS AND HARD HATS TO YOUTH WORKERS</u></p>	%	
6	<p>Supply EPWP branded 2 x overalls, safety boots and 1 x EPWP branded hard hat to youth workers. Provide all youth workers with prescribed tools for their respective trades. Specification for the mentioned tools to be provided by the Service Provider. These tools will become the property of the youth workers after the completion of the programme (Ref. SL 014 and Ref. SL 015)</p>	PS	463,826.28
7	<p>Profit and attendance on condition that services and cost has been incurred (Ref. SL 011)</p> <p><u>APPOINTMENT OF YOUTH TRAINING COORDINATOR AND / YOUNG PROFESSIONALS</u></p>	%	
8	<p>Appointment of Youth Training Coordinator/s for the duration of the contract (Ref. SL 016)</p>	PS	270,000.00
9	<p>Profit and attendance on condition that services and cost has been incurred (Ref. SL 011)</p>	%	
	Carried Forward		R
	Preliminaries and General Bill No.3 - EPWP		

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Brought Forward			R
<u>LOGISTICS FOR EXIT WORKSHOPS (REF. SL 17)</u>			
10	Provide logistic items for exit workshop (Catering, Orange Golf T-Shirts, Venue Hire and Sound System).	PS	351,383.54
11	Profit and attendance on condition that services and cost has been incurred. (Ref. SL 011)	%	
Carried Forward to Summary of Section No. 1			
Preliminaries and General			
Bill No.3 - EPWP			

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 1 - PRELIMINARIES AND GENERAL</u>			
	<u>BILL NO. 2 - CONTRACT PARTICIPATION GOALS (CPG)</u>			
	<p>Note to tenderers: As CPGs may not provide any bidder a competitive advantage. Provisional amounts and fixed percentages for profit and attendance have been provided. Only the provisional amount will be adjusted once the awarded tender amount and/or the beneficiaries have been appointed, and the final values have been ascertained.</p>			
	<u>MINIMUM TARGETED LOCAL BUILDING MATERIAL MANUFACTURERS</u>			
	<p>Provision is made for the Minimum Targeted Local Building Material Manufacturers CPG in the execution of this project as described in the Contract Participation Goals and CIDB Programme Implementation Guide Clause 4.1. Material to the value of R 2 500 000.00 should be purchased from local manufacturers as defined in the CPG specifications in terms of locality, based on determination by PQS taking into account specific project variables.</p>			
1	<p>Allowance for monitoring and monthly reporting on material purchased from Local Building Material Manufacturers by main contractor and subcontractors including profit and attendance and all associated costs to the contractor for implementation.</p>	5.00%	2,500,000.00	125,000.00
	<u>MINIMUM TARGETED LOCAL BUILDING MATERIAL SUPPLIERS</u>			
	<p>Provision is made for the Minimum Targeted Local Building Material Suppliers CPG in the execution of this project as described in the Contract Participation Goals and CIDB Programme Implementation Guide Clause 4.2. Material to the value of R8 000 000.00 should be purchased from local suppliers as defined in the CPG specifications in terms of locality, based on determination by PQS taking into account specific project variables.</p>			
	Carried Forward		R	125,000.00
	<p>Preliminaries and General Bill No.2 - Contract Participation Goals</p>			

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	Brought Forward		R	125,000.00
2	Allowance for monitoring and monthly reporting on material purchased from Local Building Material Suppliers by main contractor and subcontractors including profit and attendance and all associated costs to the contractor for implementation.	3.00%	8,000,000.00	240,000.00
	<u>MINIMUM TARGETED LOCAL LABOUR SKILLS DEVELOPMENT</u>			
3	Provision is made for the Minimum Targeted Local Labour Skills Development CPG in the execution of this project as described in the Contract Participation Goals and CIDB Programme Implementation Guide Clause 4.3 This allowance is for the cost for a suitably qualified and experienced training service provider appointed by the main contractor.	PS		500,000.00
4	Allowance for monitoring and monthly reporting on training provided by main contractor and subcontractors including profit and attendance and all associated costs to the contractor for implementation.	5.00%	500,000.00	25,000.00
	<u>MINIMUM TARGETED ENTERPRISE DEVELOPMENT</u>			
5	Provision is made for 20 % compulsory subcontracting to SMMEs in the execution of this project as described in the Contract Participation Goals and CIDB Programme Implementation Guide Clause 4.4. The provisional sum is the contractors allowance for the P&G's for the 20% sub-contractors (SMME's).The PQS is to define the actual P&G items applicable to the SMME's e.g. scaffolding , PPE etc.	PS		4,900,000.00
6	A provisional amount has been allowed for in the execution of this project as described in PG-01.1 (EC) / PG-01.2 (EC) SCOPE OF WORKS C3.7.5. The provisional amount allowed is for the appointment of training coordinator, mentor, training service providers and training of the beneficiary enterprises including monitoring and monthly reporting.	PS		1,560,000.00
	Carried Forward		R	7,350,000.00
	Preliminaries and General Bill No.2 - Contract Participation Goals			

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	Brought Forward		R	7,350,000.00
7	A provisional amount has been allowed for in the execution of this project as described in the Contract Participation Goals and CIDB Programme Implementation Guide Clause 4.4. The provisional amount allowed is for the appointment of training coordinator, mentor, training service providers and training of the beneficiary enterprises including monitoring and monthly as well as profit and attendance inclusive of all associated costs to the contractor for implementation.	3.00%	6,460,000.00	193,800.00
	<u>MINIMUM TARGETED SKILLS DEVELOPMENT GOALS</u>			
8	A provisional amount has been allowed for the Minimum Targeted Development CPG in the execution of this project as described in the Contract Participation Goals and CIDB Programme Implementation Guide Clause 4.5 <ul style="list-style-type: none"> • stipends payable to the beneficiaries • appointment of training coordinator • appointment of mentor (where applicable) • appointment of training service providers • other additional costs as per table 3 of the Standard 	PS		1,225,000.00
9	Allowance for monitoring and monthly reporting on skills development by main contractor and subcontractors including profit and attendance and all associated costs to the contractor for implementation.	5.00%	1,225,000.00	61,250.00
	<u>LABOUR INTENSIVE PARTICIPATION GOAL</u>			
	Labour Intensive Participation Goal - Labour in tensive works to the value of R 1 000 000.00 should be implemented as defined in the the Contract Participation Goals and CIDB Programme Implementation Guide Clause 4.7, based on determination by PQS taking into account specific project variables. Allowance for monitoring and monthly reporting on Works executed by means of Labour Intensive methods by main contractor and subcontractors.			
10	Allowance for monitoring and monthly reporting on Works executed by means of Labour Intensive methods by main contractor and subcontractors including profit and attendance and all inclusive of associated costs to the contractor for implementation.	3.00%	1,000,000.00	30,000.00
	Carried Forward to Summary of Section No. 1		R	8,860,050.00
	Preliminaries and General			
	Bill No.2 - Contract Participation Goals			

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	Brought Forward			R
2	Awareness Workshops			
	Selection and appointment of a competent Service Provider approved by the Representative/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.	No	15	
3	Posters, Booklets, Videos, etc.			
	Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the contract period.	mnth	30	
4	Access to Condoms			
	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 contract period.	mnth	30	
5	Monitoring			
	Monitoring HIV/AIDS awareness of workers, providing the Representative/Agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the contract period and close out.	mnth	30	
Carried Forward to Summary of Section No. 1				
Preliminaries and General				
Bill No.4 - AIDS				
				R

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Bill No	Page No	Amount
Preliminaries and General		
SECTION SUMMARY - Preliminaries and General		
1	6	
2	9	
3	12	
4	14	
SUBTOTAL		R
Carried to Final Summary		R
Preliminaries and General		

**ACACIA PARK
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Brought Forward		R
<u>General</u>		
Water supply pipes and other piping in ground that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings to the satisfaction of the principal agent		
Unless otherwise described all materials are to become the property of the contractor and are to be removed from the site		
<u>REMOVAL OF EXISTING WORK</u>		
<u>Demolishing and removing</u>		
Demolition of single storey units including Carport/Garage (125m2/unit)	m2	14,125
Excavation in earth not exceeding 2m deep to demolish and remove 110mm clay sewer pipe	m	3,390
600mm diameter manholes not exceeding 1.5m deep	m3	193
Carried to Final Summary		R
Demolitions - 85 Units		
Bill No.1 - Demolitions		

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Demolitions - 85 Units		Page No 17			Amount
Bill No	<u>SECTION SUMMARY - Demolitions - 85 Units</u>				
	1 Bill No.1 - Demolitions				
	SUBTOTAL				
Carried to Final Summary		R			
Demolitions - 85 Units					

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Item No	Quantity	Rate	Amount
<u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u>			
<u>BILL NO.1 - EARTHWORKS</u>			
<u>(CPAP WORK GROUP 104 UNLESS OTHERWISE STATED)</u>			
NOTE			
<p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p>			
<u>Preambles</u>			
<p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p>			
<p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p>			
<p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
<u>Nature of ground</u>			
<p>The nature of the ground is unknown and the contractor is to make his own assessment and due allowance for same</p>			
Carried Forward			R
Building Works - 85 Units Bill No.1 - Earthworks			

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	Brought Forward			R
	<p><u>Subterranean water</u></p> <p>The nature of the ground is unknown and the contractor is to make his own assessment and due allowance for same</p> <p><u>Carting away of excavated material</u></p> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p> <p><u>Filling and layer work materials</u></p> <p>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</p> <p><u>Testing</u></p> <p>Prices for filling are to include for all necessary density and other tests</p> <p><u>Formwork</u></p> <p>Formwork to sides of footings, 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</p> <p><u>SITE CLEARANCE</u></p> <p><u>Site clearance</u></p>			
1	<p>Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth</p>	m2	416	
	Carried Forward			R
	<p>Building Works - 85 Units</p> <p>Bill No.1 - Earthworks</p>			

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Brought Forward			R
<u>REMOVAL OF TREES ETC</u>			
<u>Taking out and removing, grubbing up roots and filling in holes</u>			
2	Tree stump not exceeding 1m high, exceeding 200mm and not exceeding 500mm girth	No	1
3	Tree stump not exceeding 1m high, exceeding 1500mm and not exceeding 2000mm girth	No	1
<u>Cutting down and removing, grubbing up roots, filling in holes and compacting to 95% Mod AASHTO density</u>			
4	Hedge not exceeding 1500mm high	m	15
5	Hedge exceeding 1500mm and not exceeding 3000mm high	m	10
<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>			
<u>EXCAVATIONS ETC</u>			
<u>Excavation in earth not exceeding 2m deep</u>			
6	Trenches	m3	43
7	Holes	m3	1
8	Thickening under surface beds etc	m3	3
<u>Extra over trench and hole excavations in earth for excavation in</u>			
9	Soft rock	m3	5
10	Hard rock	m3	3
<u>Extra over trench and hole excavations in earth for breaking up and removing</u>			
11	Brickwork	m3	5
12	Unreinforced concrete	m3	5
Carried Forward			R
Building Works - 85 Units Bill No.1 - Earthworks			

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	Brought Forward			R
13	Reinforced concrete	m3	3	
	<u>Back excavation of vertical sides of excavations in earth for working space including backfilling compacted to 93% Mod AASHTO density</u>			
14	Not exceeding 500mm deep for placing and removing formwork to walls etc, 250mm away from excavated face	m2	66	
15	Extra over for excavation in soft rock	m2	7	
16	Extra over for excavation in hard rock	m2	3	
	<u>Extra over all excavations for carting away</u>			
17	Surplus material from bulk excavations and/or stock piles on site to a dumping site located by the contractor (This rate 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, and spoiled at a site located by the contractor not exceeding 10km in one direction from the site. Rate should allow for the spoiling costs paid at the dump site.	m3	27	
18	Extra over carting away of surplus material further than 10km in one direction from the site	m3	27	
	<u>Risk of collapse of excavations</u>			
19	Sides of trench and hole excavations not exceeding 1,5m deep	m2	84	
20	Sides of trench and hole excavations exceeding 1,5m deep	m2	86	
	<u>Keeping excavations free of water</u>			
21	Keeping excavations free of all water other than subterranean water		Item	
	Carried Forward			R
	Building Works - 85 Units Bill No.1 - Earthworks			

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Brought Forward			R
<u>FILLING ETC</u>			
<u>Selected earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density</u>			
22	Under floors, steps, pavings, etc	m3	1
23	Backfilling to trenches, holes, etc	m3	20
<u>Filling of coarse river sand supplied by the contractor, consolidated</u>			
24	Under floors etc	m3	12
25	Compaction of natural or excavated ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density	m2	83
<u>WEED KILLERS, INSECTICIDES, ETC</u>			
<u>Soil insecticide in accordance with SANS 5859</u>			
26	Under floors etc, including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	83
27	To bottoms and sides of trenches etc	m2	273
<u>TESTS</u>			
<u>Prescribed tests to determine degree of compaction or other properties of ground or filling (the following test should include travelling cost from laboratory to site within 10km in one direction to the site)</u>			
28	"Modified AASHTO Density" test	No	2
29	In-situ dry density test in accordance with method A10(b) of TMH1	No	2
Carried Forward to Summary of Section No. 3			R
Building Works - 85 Units			
Bill No.1 - Earthworks			

Item No	Quantity	Rate	Amount
<p><u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u></p> <p><u>BILL NO.2 - CONCRETE, FORMWORK AND REINFORCEMENT</u></p> <p><u>(CPAP WORK GROUP 110, 111 and 114 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
Carried Forward		R	
<p>Building Works - 85 Units</p> <p>Bill No.2 - Concrete, Formwork and Reinforcement</p>			

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Brought Forward	R
<p><u>Cost of tests</u></p> <p>The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests for approval. The testing shall be undertaken by an approved independent firm or institution nominated by the contractor (test cubes are measured separately)</p> <p><u>No-Fines concrete</u></p> <p>No-Fines concrete shall consist of 6 part aggregate to one part cement (1:6)</p> <p><u>Striking off and curing</u></p> <p>Concrete prices are to include for striking off and curing.</p> <p><u>Formwork</u></p> <p>Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use</p> <p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself</p> <p>Formwork to soffits of solid slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described</p> <p>Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described</p>	
Carried Forward	R
<p>Building Works - 85 Units</p> <p>Bill No.2 - Concrete, Formwork and Reinforcement</p>	

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Brought Forward			R
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 AGAINST EXCAVATED SURFACES</u>			
<u>15MPa/19mm concrete</u>			
1	Blinding	m3	2
<u>20MPa/19mm concrete</u>			
2	Strip footings	m3	2
3	Bases	m3	1
<u>UNREINFORCED CONCRETE</u>			
<u>15MPa/19mm concrete</u>			
4	Filling to cavity of hollow brick wall	m3	2
<u>REINFORCED CONCRETE</u>			
<u>25MPa/19mm concrete</u>			
5	Surface beds on waterproofing	m3	8
6	Strip footings	m3	10
<u>TEST CUBES</u>			
7	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	8
Carried Forward			R
Building Works - 85 Units Bill No.2 - Concrete, Formwork and Reinforcement			

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	Brought Forward			R
<u>CONCRETE SUNDRIES</u>				
<u>Finishing top surfaces of concrete smooth with a wood float</u>				
8	Surface beds, slabs, etc	m2	83	
<u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u>				
<u>Rough formwork to sides</u>				
9	Strip footings	m2	33	
<u>MOVEMENT JOINTS ETC</u>				
<u>Expansion joints with 10mm closed cell expanded polyethylene between vertical concrete and brick surfaces</u>				
10	Not exceeding 300mm high to edges of surface beds	m	66	
<u>REINFORCEMENT</u>				
<u>Mild & High tensile steel reinforcement to structural concrete work</u>				
11	Steel bars of varying diameter	t	0.40	
<u>Fabric reinforcement</u>				
12	Type 193 fabric reinforcement in concrete surface beds etc	m2	47	
13	Type 245 fabric reinforcement in concrete surface beds etc	m2	32	
 Carried Forward to Summary of Section No. 3				
Building Works - 85 Units				
Bill No.2 - Concrete, Formwork and Reinforcement				
				R

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u></p> <p><u>BILL NO.3 - MASONRY</u></p> <p><u>(CPAP WORK GROUP 116 & 118 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</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>			
	Carried Forward		R	
	Building Works - 85 Units Bill No.3 - Masonry			

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Brought Forward			R
<u>Hollow walls</u>			
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			
<u>Bagged and sealed walls</u>			
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 bitumen emulsion waterproofing coating			
<u>BRICKWORK</u>			
<u>FOUNDATIONS</u>			
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar</u>			
1	One brick walls	m2	7
2	280mm Hollow walls of two half brick skins, including wire ties	m2	43
<u>SUPERSTRUCTURE</u>			
<u>Brickwork of NFP bricks (14 MPa nominal compressive strength) in class II mortar</u>			
3	Half brick walls.	m2	45
4	Half brick walls in beamfilling	m2	11
5	280mm Hollow walls of two half brick skins, including wire ties	m2	99
<u>BRICKWORK SUNDRIES</u>			
6	Splayed mortar fillets one course high in 60mm cavities	m	97
7	Closing 60mm cavities of hollow walls vertically with brickwork half brick wide	m	40
Carried Forward			R
Building Works - 85 Units Bill No.3 - Masonry			

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Brought Forward			R
8	Closing 60mm cavity of hollow wall horizontally with one course of brickwork	m	13
9	150mm Wide sill set sloping and slightly projecting	m	13
<u>Bagging of 1:3 cement and sand mixture:</u>			
10	On brick walls, piers, etc	m2	21
<u>Joint forming material in movement joints</u>			
11	10mm Bitumen impregnated fibre board not exceeding 300mm wide built in vertically through brick walls	m	8
<u>2,5mm Galvanised brick reinforcement</u>			
12	75mm Wide reinforcement built in horizontally	m	1,120
<u>Prestressed fabricated concrete lintels including necessary temporary supports</u>			
13	110 x 75mm Lintels in lengths not exceeding 3m	m	67
<u>Galvanised hoop iron cramps, ties, etc</u>			
14	32 x 1,6mm Roof tie 1,5m long with one end built into brickwork and other end fixed to timber	No	55
<u>Air bricks etc</u>			
15	229 x 152mm Clay vermin proof air brick	No	9
<u>FACE BRICKWORK</u>			
<u>Allow the prime cost amount amount of R 9,000.00 (Nine thousand Rand) per thousand for 'breeze block bricks' delivered to site pointed with square recessed horizontal and vertical joints</u>			
16	Half brick walls pointed on both sides	m2	21
Carried Forward			R
Building Works - 85 Units Bill No.3 - Masonry			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u></p> <p><u>BILL NO.4 - WATERPROOFING</u></p> <p><u>(CPAP WORK GROUP 120 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Waterproofing</u></p> <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>			
	Carried Forward		R	
	<p>Building Works - 85 Units</p> <p>Bill No.4 - Waterproofing</p>			

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Brought Forward			R
<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	m2	8
2	In walls vertically at reveals	m2	11
<u>One layer 375 micron orange polyethylene waterproof sheeting (SANS 952-1985 type A) sealed at laps with PVC self-adhesive tape</u>			
3	Under surface beds	m2	83
<u>Two coats "ABE dura.proof hydrokote" or similar approved flexible hydraulic micro-mortar waterproofing and protection membrane, applied in accordance with the manufacturers instruction</u>			
4	On shower walls	m2	11
5	On shower floors	m2	2
<u>Two coats of grey coloured "Aqua-mite" or similar approved waterproof coating in accordance with the manufacturers instruction</u>			
6	On valley linings	m	7
Carried Forward to Summary of Section No. 3			R
Building Works - 85 Units			
Bill No.4 - Waterproofing			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u></p> <p><u>BILL NO.5 - ROOF COVERINGS, ETC</u></p> <p><u>(CPAP WORK GROUP 122, 124 &125 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
	Carried Forward		R	
	<p>Building Works - 85 Units</p> <p>Bill No.5 - Roof Coverings, etc</p>			

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Brought Forward			R
<u>Guarantee</u>			
The contractor will be required to provide an Engineer and a written guarantee, stating that :			
1. The roof sheeting is of the specified thickness.			
2. The client is indemnified against any defects, including colour deterioration for a minimum period of 5 years.			
3. All roof coverings and side cladding are to be installed to comply with SANS Code of Practice 0237 where applicable. All roof sheeting shall be laid under a 5 year guarantee for site workmanship and water tightness.			
<u>PROFILED METAL SHEETING AND ACCESSORIES</u> <u>(CPAP WORK GROUP 124)</u>			
<u>Global Roofing Solutions 700mm cover Klip-Lok 700™ profile roll-formed in continuous lengths from ZINCALUME® AZ150 coated steel G550 0.53mm (Heavy Industrial) with a Clean COLORBOND finish to one side and a standard backing coat, Shadow Grey to other, fixed to timber purlin using KL700 plus clips fixed with , all following the manufacturer's specifications by a GRS approved contractor. A written and approved five year guarantee of water-tightness shall be issued after approval of roofs by the manufacturer.</u>			
1	Roof covering with pitches not exceeding 25 degrees	m2	174
<u>0,53mm AZ150 Zincalume steel sheet accessories to preceding roof covering and side cladding with clean Colorbond finish in approved standard colour on one side and a standard backing coat to the reverse side</u>			
2	Ridge cappings 550mm girth bent and notched to suit roof profile including serrated closers and poly-closers	m	26
3	Valley gutters (inverted roll-top ridge capping) 600mm girth	m	7
4	Gable Trim (Barge Flash) 580mm girth 3 times bent.	m	18
Carried Forward			R
Building Works - 85 Units Bill No.5 - Roof Coverings, etc			

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Brought Forward		R
<u>ROOF AND WALL INSULATION (CPAP WORK GROUP 122)</u>		
<u>"Sisalation Fireshield NC 502 D/S" or similar approved double sided aluminium foil radiant barrier</u>		
5	Insulation sheeting fixed to underside of rafters (at approximately 1200mm centres) with 150mm stapled laps including galvanised PVC coated steel straining wires at not exceeding 400mm centres and double-sided tape at edges where required	<div>m2</div> <div>174</div>
Carried Forward to Summary of Section No. 3		R
Building Works - 85 Units Bill No.5 - Roof Coverings, etc		

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u></p> <p><u>BILL NO.6 - CARPENTRY AND JOINERY</u></p> <p><u>(CPAP WORK GROUP 126 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Fixing</u></p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete</p>			
	Carried Forward		R	
	<p>Building Works - 85 Units</p> <p>Bill No.6 - Carpentry and Joinery</p>			

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Brought Forward					R
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given elsewhere</p> <p>All sections of timber to be built into brickwork of concrete to be wrapped in Gunplast and the cost is deemed to be included in the relevant item.</p> <p>Tenderers should include silicone sealant between skirting and finished surfaces of walls and floors in their price</p> <p><u>Joinery</u></p> <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> <p>All exposed timber to be treated with preservative to combat fungus as prescribed by the Forestry Act 1968 (Act 72 of 1968).</p> <p><u>PLATE NAILED TIMBER ROOF TRUSS CONSTRUCTION ETC.</u></p> <p><u>DESIGN, SUPPLY AND INSTALL</u></p>					
1	<p>Roof construction for double pitched roof to Type 4 typology, 3 bedroom residential building with gable ends on 3 sides, valleys,etc. overall size 19,400 x 9,380m on plan and approximately 4,500m high overall including wall plates, trusses at approximately 1 025mm centres and 50 x 76mm purlins/battens at approximately 1,200m centres for roof covering, complete.</p>	No	1		
<p><u>TIMBER LEAN TO/CARPORT ROOF CONSTRUCTION</u></p> <p><u>Wrought softwood grade S5</u></p>					
2	<p>50 x 152mm Rafter in lengths exceeding 2.4m and not exceeding 3.9m</p>	m	9		
Carried Forward					R
<p>Building Works - 85 Units Bill No.6 - Carpentry and Joinery</p>					

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	Brought Forward			R
3	50 x 228mm Rafter in lengths exceeding 2.4m and not exceeding 3.9m	m	9	
	<u>Wrought laminated pine grade S8 (architectural finish)</u>			
4	45 x 297mm Bolted beams	m	6	
5	70 x 231mm Bolted beams in single lengths exceeding 3.9m and not exceeding 6.6m	m	12	
	<u>Sundries</u>			
6	90 Degree galvanised truss hanger to suit 50mm wide timber beam	No	12	
7	6mm Diameter x 60mm long screwbolt with head, nut and two washers	No	12	
8	10mm Diameter x 90mm Black Cup Bolts & Nuts,	No	24	
	<u>EAVES, VERGES, ETC</u>			
	<u>Wrought meranti</u>			
9	16mm Quadrant beads	m	38	
	<u>Medium density plain fibre-cement flat sheets</u>			
10	6mm Eaves or verge soffit covering including 38 x 38mm sawn softwood branders along edges, along centre and at 450mm centres across sheets	m2	19	
	<u>Medium density plain fibre-cement fascias and barge boards</u>			
11	12 x 225mm Fascias and barge boards, including galvanised steel H-profile jointing strips	m	38	
	<u>FLOORS AND SKIRTINGS</u>			
	<u>SKIRTINGS</u>			
	<u>Wrought meranti</u>			
12	20 x 70mm Skirtings, plugged	m	40	
	Carried Forward			R
	Building Works - 85 Units Bill No.6 - Carpentry and Joinery			

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	Brought Forward			R
13	21 x 140mm Decorative moulded skirtings plugged	m	30	
	<u>DOORS, ETC</u>			
	<u>Semi-solid flush doors with 3,2mm plain hardboard covering on both sides, hung to steel or timber frames</u>			
14	Semi-solid timber flush single leaf swing door, overall size 813 x 2032mm high	No	4	
15	Extra over for 300 x 300mm framed opening for metal louvre unit (louvre unit elsewhere)	No	3	
	<u>Hollow core flush doors with commercial veneer, hung to slide</u>			
16	40mm Door 813 x 2032mm high	No	1	
Carried Forward to Summary of Section No. 3				R
Building Works - 85 Units				
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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u></p> <p><u>BILL NO.7 - CEILINGS</u></p> <p><u>(CPAP WORK GROUP 129 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Fixing</u></p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete</p>			
	<p style="text-align: right;">Carried Forward</p> <p>Building Works - 85 Units Bill No.7 - Ceilings</p>		R	

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CONSTRUCTION OF REPLACEMENT ACCOMODATION &
ASSOCIATED INFRASTRUCTURE

Brought Forward					R
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					
<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					
Unless otherwise described bulkheads shall be deemed to be horizontal along the length					
<u>Steel components</u>					
All steel components for ceilings, partitions, etc are to be galvanised in accordance with SANS 121					
<u>Openings</u>					
Prices for openings for light fittings, ventilation grilles, air conditioning diffusers, etc are to include for any necessary additional support, trimming around, etc					
<u>CEILING TIMBERS, BEADS, INSULATION, ETC</u>					
<u>"Knauf" insulation</u>					
1	135mm Thick Glasswool thermal insulation laid on top of brandering between roof timbers, etc.	m2	89		
Carried Forward					R
Building Works - 85 Units Bill No.7 - Ceilings					

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Brought Forward			R
<u>NAILED-UP CEILINGS</u>			
<u>6mm "Gyproc Rhinoboard" plasterboard fixed to 38x50mm brandering, with tape fixed over joints and the whole finished with "Gyproc RhinoLite" plaster trowelled to a smooth polished surface complete and in strict accordance with the manufacturer's instructions</u>			
2	Ceilings nailed to 38 x 50mm sawn softwood brandering (brandering elsewhere measured) at 300mm centres generally in both direction at joints and edges of boards	m2	89
3	Extra over ceiling for 610 x 610mm trap door of 38 x 50mm wrought softwood rebated framing with one cross brander, covered with ceiling board and fitted flush in opening, including necessary trimmers around	No	1
4	Opening for 100mm diameter downlighter	No	6
5	Rectangular bulkheads against wall 400mm wide x 200mm high, suspended not exceeding 1m below timber rafters at approximately 1200mm centres	m	14
<u>Polystyrene cornices</u>			
6	100 x 100mm Coved cornice.	m	70
Carried Forward to Summary of Section No. 3			R
Building Works - 85 Units			
Bill No.7 - Ceilings			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u></p> <p><u>BILL NO.8 - FLOOR COVERINGS, ETC</u></p> <p><u>(CPAP WORK GROUP 130 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Fixing</u></p> <p>Floor coverings, wall linings, etc shall, where applicable, be fixed with adhesive as recommended by the manufacturers of the flooring, linings, etc</p>			
	<p style="text-align: right;">Carried Forward</p> <p>Building Works - 85 Units Bill No.8 - Floor Coverings, etc</p>		R	

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Brought Forward	R
<p><u>Surface preparation, priming, curing, cleaning etc</u></p> <p>Descriptions of the items below are deemed to include all necessary preparation, priming, mixing, curing, cleaning etc as prescribed by the manufacturers of the various products</p> <p><u>Prime Cost (PC) Sums</u></p> <p>Prime Cost (PC) Sums means an amount of money provided in the bills of quantities for material and goods to be obtained from a supplier nominated by the architect and to be fixed by the contractor</p> <p>The prime cost amount shall be omitted from the contract sum and the amounts actually paid by the contractor in respect of the purchase of the nett quantity of such items including delivery to site shall be added to the contract sum</p> <p>The contractor has to allow for labour, profit and waste in his rate over and above the PC amount</p> <p><u>Installation by an Approved Applicator</u></p> <p>The installation of the floor coverings is to be executed by an approved applicator (subcontractor)</p>	
Carried Forward	R
<p>Building Works - 85 Units</p> <p>Bill No.8 - Floor Coverings, etc</p>	

ACACIA PARK
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Brought Forward	R
<p><u>Installation and Preparation of Sub-floor</u></p> <p>Vinyl floor coverings shall be installed in accordance with manufacturer's recommendations. Sub-floors must be smooth, hard, clean, level and dry before laying commences.</p> <p>Where existing vinyl floor coverings have been uplifted, then all bitumen adhesive must be removed by means of a scraper or any other suitable mechanical device.</p> <p>Dirt and dust must be removed by sweeping or, preferably by vacuuming.</p> <p>All grease, oil patches and any oil-based paint must be removed with suitable paint strippers or degreasing compounds. Once grease has been removed then the sub-floor must be washed to remove any stripper or residue and then allowed to dry thoroughly.</p> <p>All subfloors must be tested for moisture content with a hygrometer or Trammex prior to installation.</p> <p>Vinyl floor coverings must be allowed to relax for 24 hours in a uniform room temperature between 18 degrees C and 27 degrees C prior to installation.</p> <p>Vinyl floor coverings are to be fixed with adhesive as recommended by the manufacturer and in accordance with the manufacturers instructions.</p> <p>Vinyl floor coverings should be hotseam welded using welding rod as recommended by the manufacturer. It is essential that during the course of the installation the material be rolled in both directions with an articulated 68kg three sectional metal floor roller.</p>	
Carried Forward	R
<p>Building Works - 85 Units Bill No.8 - Floor Coverings, etc</p>	

**ACACIA PARK
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Brought Forward			R
<u>FLOOR COVERINGS</u>			
<u>228 x 1219 x 3mm "FloorWorX" planks including underlay (Allow prime cost of R375,00/m² for the supply and deliver to site) laid to screeded floors (screeds elsewhere measured) including fitting, cutting and circular cutting all in accordance with the manufacturers specification.</u>			
1	On floors	m2	30
<u>8mm Engineered laminate floor planks including rubber underlay (Allow prime cost of R300,00/m² for the supply and deliver to site) laid to screeded floors (screeds elsewhere measured) including fitting, cutting all in accordance with the manufacturers specification.</u>			
2	On floors	m2	41
Carried Forward to Summary of Section No. 3			R
Building Works - 85 Units			
Bill No.8 - Floor Coverings, etc			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u></p> <p><u>BILL NO.9 - IRONMONGERY</u></p> <p><u>(CPAP WORK GROUP 132 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
	<p style="text-align: right;">Carried Forward</p> <p>Building Works - 85 Units Bill No.9 - Ironmongery</p>		R	

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CONSTRUCTION OF REPLACEMENT ACCOMODATION &
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Brought Forward				R
<u>Proprietary items</u>				
Where applicable the manufacturers' names or product catalogue titles are given in sub-headings preceding the items				
Prices are to be based on the specific products/articles specified. If tenderers wish to offer alternative products/articles for certain items, these items are to be clearly marked and the alternative specification given with supporting brochures etc clarifying the features of the products/articles offered				
On request returnable samples are to be provided to the Project Manager for consideration				
<u>Finishes to ironmongery</u>				
Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list:				
BS Satin bronze lacquered				
CH Chromium plated				
SC Satin chromium plated				
SE Silver enamelled				
Sn Satin Nichol				
GE Grey enamelled				
AN Anodised natural				
AA Anodised Aluminium				
AS Anodised silver				
AB Anodised bronze				
AG Anodised gold				
ABL Anodised black				
PB Polished brass				
PL Polished and lacquered				
PT Epoxy coated				
SD Sanded				
S Sil				
<u>HINGES, BOLTS, ETC</u>				
<u>"Yale" or similar approved</u>				
1	100 x 76mm Brass Stainless Steel Butt Hinge (Product Code 1075472)	Pairs	6.0	
Carried Forward				R
Building Works - 85 Units Bill No.9 - Ironmongery				

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	Brought Forward			R
<u>LOCKS</u>				
<u>"Union" or similar approved</u>				
2	CP Two lever upright lock CODE 22311-7615.	No	3	
3	SS 8mm "22314" Bathroom Lock	No	1	
<u>HANDLES</u>				
<u>"Union" or similar approved</u>				
4	Waterbok Lever Handle on Rose AL6W00-06AS	Pairs	4.0	
<u>DOOR CLOSERS</u>				
<u>"Union" or similar approved</u>				
5	"744P DC744 EN1-6 PA DA" Door closer	No	2	
<u>SLIDING GEAR</u>				
<u>"Hillaldam" or similar approved</u>				
6	Domestic Sliding Door Kit	No	1	
<u>SUNDRIES</u>				
<u>Coir door mats laid loose in mat surround</u>				
7	1000 x 1500 x 38mm Door mat	No	2	
<u>"Union" or similar approved</u>				
8	AL8722AS Hat & Coat Hook with rubber buffer.	No	2	
<u>BATHROOM FITTINGS</u>				
<u>"Solid" or similar approved</u>				
9	19mm Diameter 900mm long chromium plated shower rail with chromium plated shower rail bracket plugged	No	2	
Carried Forward to Summary of Section No. 3				R
Building Works - 85 Units				
Bill No.9 - Ironmongery				

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CONSTRUCTION OF REPLACEMENT ACCOMODATION &
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	Brought Forward			R
	<p><u>Aluminium doors, windows, etc</u></p> <p>Doors and windows shall comply with AAAMSA design criteria</p> <p>Glazing shall comply with SAGGA regulations. Glass shall be as described in the headings to window descriptions. Glass thickness shall comply with SAGGA regulations irrespective of thicknesses shown on the schedules/drawings</p> <p>Doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed</p> <p>The following certificates shall be provided prior to commencement of site work:</p> <ol style="list-style-type: none"> 1. A copy of the relevant AAAMSA Performance Test Certificate from the manufacturer/contractor supplying the architectural aluminium product 2. A Certificate of Conformance confirming that anodising or powder coating has been processed in accordance with SANS 999 and SANS 1796 respectively 3. A powder guarantee of not less than 15 years issued by the powder manufacturer. The specific conditions contained in this guarantee shall form part of the powder coating process 4. A Certificate of Conformance confirming that glazing has been installed in accordance with SANS 0137, ensuring that safety glazing materials have been installed in the mandatory areas and that each individual pane of safety glazing materials has been permanently marked 5. A warranty from the manufacturer of the laminated safety glass and/or hermetically sealed glazing units guaranteeing the products against delamination and colour degradation for a period of not less than five years <p><u>GALVANISED STEEL MINOR WORK</u></p> <p><u>Bolts</u></p>			
1	10mm M10 Standard Galvanised Bolt, nut and washers.	No	10	
	Carried Forward			R
	<p>Building Works - 85 Units</p> <p>Bill No.10 - Metalwork</p>			

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	Brought Forward			R
	<u>Hot-dip galvanised steel posts</u>			
2	76 x 76 Square carport post	m	12	
3	100 x 100 x 50mm, 5mm Thick, L-Shaped bracket twice holed for bolts on one side (bolts elsewhere measured) and welded to top of post on the other.	No	4	
	<u>GALVANISED STEEL POWDER COATED GATES, SCREENS, ETC</u>			
	<u>"Trellidoor" or similar approved galvanised steel powder coated security gates, with and including slam lock fixed to brickwork or concrete, for opening</u>			
4	Size 1000 x 2100mm high	No	2	
5	Size 2000 x 2100mm high	No	1	
	<u>GALVANISED PRESSED STEEL DOOR FRAMES</u>			
	<u>1.6mm Thick single rebated frame for half brick wall complete with butt hinges and including setting up, building in, filling back of frame with cement mortar, etc</u>			
6	Frame for door size 813 x 2032mm	No	4	
	<u>POWDER COATED ALUMINIUM WINDOWS, DOORS, ETC BY AAAMSA MEMBERS ONLY AND PROVIDE AAAMSA PERFORMANCE TEST CERTIFICATE</u>			
	<u>Casement pre-glazed top hung aluminium windows complete with ironmongery and including setting up, building in, filling back of frame with cement mortar, sealing around with silicone, etc</u>			
7	Window type PT66 size 600 x 600mm glazed with 6.38mm Pacific obscure laminated safety glass.	No	2	
8	Window type PT612 size 600 x 1200mm glazed with 6.38mm clear laminated safety glass.	No	1	
9	Window type PT615 size 600 x 1500mm glazed with 6.38mm clear laminated safety glass.	No	1	
	Carried Forward			R
	Building Works - 85 Units Bill No.10 - Metalwork			

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Brought Forward			R
10	Window type PT1812 size 1800 x 1200mm glazed with 6.38mm clear laminated safety glass.	No	5
11	Window type PT1518 size 1500 x 1800mm glazed with 6,38mm clear laminated safety glass.	No	1
<u>Pre-glazed aluminium hinged doors, sidelights, etc complete with ironmongery and including setting up, building in, filling back of frame with cement mortar, sealing around same with silicone, etc</u>			
12	Door type SHG1R2, size 900 x 2100mm high overall	No	1
13	Stable door type SDG1R1, size 900 x 2100mm high overall	No	2
14	Double door in two equal leaves type DHDM1821, size 1800 x 2100mm high overall	No	1
15	Patio sidelights to either side of double door type SL0621, size 590mm x 2100mm high overall	No	2
<u>STEEL BURGLAR BARS</u>			
<u>Burglar bars comprising 25 x 5mm flat horizontal bars at 110mm centres and 25 x 5mm flat vertical bars at 300mm centres, bolted to walls with one-way countersunk bolts:</u>			
16	Burglar bar for window size 600 x 600mm high.	No	2
17	Ditto, but 600 x 1200mm.	No	1
18	Ditto, but 600 x 1500mm	No	1
19	Ditto, but 1800 x 1200mm	No	5
20	Ditto, but 1500 x 1800mm	No	1
Carried Forward			R
Building Works - 85 Units Bill No.10 - Metalwork			

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Brought Forward			R
<u>ALUMINIUM LOUVRE UNITS</u>			
<u>POWDER COATED HORIZONTAL ALUMINIUM LOUVRE UNITS</u>			
<u>"Trox" or similar approved fixed louvre units fixed to brickwork or concrete</u>			
21	Standard louvre unit type AGS-T, 600 x 600mm high	No	1
<u>SHOWER CUBICLE PANELS AND DOORS</u>			
<u>Powder coated aluminium shower cubicle panels and doors with frames, sliding gear, pivot hinges,cleats, stops, etc. and 6mm toughened clear safety glass, plugged to tiled walls and sealed with silicone sealant (sizes to be verified on site):</u>			
22	Fixed panel approximate size 800 x 1800mm high	No	1
23	Hinged door approximate size 960 x 1800mm high	No	2
Carried Forward to Summary of Section No. 3			R
Building Works - 85 Units			
Bill No.10 - Metalwork			

Item No	Quantity	Rate	Amount
<u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u>			
<u>BILL NO.11 - PLASTERING</u>			
<u>(CPAP WORK GROUP 142 UNLESS OTHERWISE STATED)</u>			
NOTE			
The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.			
<u>Preambles</u>			
The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.			
Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.			
The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.			
<u>SCREEDS</u>			
<u>Screeds wood floated, on concrete</u>			
1	25mm Thick on floors and landings	m2	18
2	30mm Thick on floors and landings	m2	71
Carried Forward			R
Building Works - 85 Units Bill No.11 - Plastering			

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	Brought Forward			R
	<u>GRANOLITHIC</u>			
	<u>Untinted granolithic, on concrete</u>			
3	30mm Thick on floors and landings	m2	3	
	<u>INTERNAL PLASTER</u>			
	<u>Cement plaster wood floated for tiles, on brickwork</u>			
4	On walls	m2	105	
5	On narrow widths not exceeding 300mm wide	m2	2	
	<u>Cement plaster steel trowelled, on brickwork</u>			
6	On walls	m2	76	
7	On narrow widths not exceeding 300mm wide	m2	7	
	<u>Gypsum skim plaster finishing coat on plastered walls</u>			
8	On walls	m2	76	
9	On ceilings	m2	89	
10	On narrow widths not exceeding 300mm wide	m2	7	
	<u>EXTERNAL PLASTER</u>			
	<u>Cement plaster wood floated, on brickwork</u>			
11	On walls	m2	99	
12	On narrow widths not exceeding 300mm wide	m2	4	
13	On sloping top, front edge and projecting soffit of sills 300mm girth	m	13	
	<u>Rough-cast plaster, on brickwork</u>			
14	On walls	m2	66	
15	On narrow widths not exceeding 300mm wide	m2	14	
	Carried Forward			R
	Building Works - 85 Units			
	Bill No.11 - Plastering			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u></p> <p><u>BILL NO.12 - TILING</u></p> <p><u>(CPAP WORK GROUP 142 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Patterns</u></p> <p>Unless otherwise described, tiles shall be laid with continuous joints in both directions</p>			
	<p style="text-align: right;">Carried Forward</p> <p>Building Works - 85 Units Bill No.12 - Tiling</p>		R	

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Brought Forward	R
<p><u>Fixing</u></p> <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 as recommended by the manufacturer of the tiles</p> <p><u>Repairs</u></p> <p>Repairs to damaged areas in the existing concrete surface bed or slab is to be done using "TAL Superscreed"</p> <p><u>Grouting joints</u></p> <p>Joints to be 3 to 5mm maximum width</p> <p><u>Prime Cost (PC) Sums</u></p> <p>Prime Cost (PC) Sums means an amount of money provided in the bills of quantities for material and goods to be obtained from a supplier nominated by the architect and to be fixed by the contractor</p> <p>The prime cost amount shall be omitted from the contract sum and the amounts actually paid by the contractor in respect of the purchase of the nett quantity of such items including delivery to site shall be added to the contract sum</p> <p>The contractor has to allow for labour, profit and waste in his rate over and above the PC amount</p>	
<p style="text-align: right;">Carried Forward</p> <p>Building Works - 85 Units Bill No.12 - Tiling</p>	<p style="text-align: right;">R</p>

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Brought Forward			R
<u>WALL TILING</u>			
<u>Allow the prime cost amount of R250/m2 (two hundred and fifty Rand) for ceramic tiles not exceeding 300 x 300mm for the supply and delivery to site), fixed with adhesive to plaster (plaster elsewhere) and flush pointed with tinted grout</u>			
1	On walls	m2	61
2	On walls in isolated panels, splashbacks, etc not exceeding 1m ²	m2	21
3	On narrow widths not exceeding 300mm	m2	1
<u>FLOOR TILING</u>			
<u>Allow the prime cost amount of R300/m2 (Three hundred rand) for full bodied porcelain floor tiles not exceeding 600 x 600mm the supply and delivery to site), fixed with adhesive to screed (screed elsewhere) and flush pointed with grout</u>			
4	On floors and landings	m2	18
5	On narrow widths not exceeding 300mm wide	m2	2
6	Skirting 100mm high of cut tiles	m	23
<u>SUNDRIES</u>			
<u>"M-Trim" or similar approved aluminium dividing strips</u>			
7	5mm Straight edge trim (code ASE050)	m	14
8	12mm Straight edge trim (code ASE120)	m	9
Carried Forward to Summary of Section No. 3			R
Building Works - 85 Units			
Bill No.12 - Tiling			

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Item No	Quantity	Rate	Amount
<u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u>			
<u>BILL NO.13 - PLUMBING AND DRAINAGE</u>			
<u>(CPAP WORK GROUP 148 and 146 UNLESS OTHERWISE STATED)</u>			
NOTE			
<p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p>			
<u>Preambles</u>			
<p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p>			
<p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p>			
<p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
<u>Supplementary Preambles</u>			
<u>uPVC pipes and fittings:</u>			
<p>Soil, waste and vent pipes and fittings shall be solvent weld jointed</p>			
Carried Forward			R
Building Works - 85 Units Bill No.13 - Plumbing and Drainage			

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CONSTRUCTION OF REPLACEMENT ACCOMODATION &
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Brought Forward	R
<p><u>Copper pipes:</u></p> <p>Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground. All pipes that are not chased on brickwork shall be tagged.</p> <p><u>Reducing fittings</u></p> <p>Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained</p> <p><u>Wire gratings</u></p> <p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings</p> <p><u>Exposed concrete surfaces</u></p> <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> <p><u>Flush pans</u></p> <p>Flush pans shall have straight or side outlets and "P" or "S" traps as necessary</p>	
Carried Forward	R
<p>Building Works - 85 Units Bill No.13 - Plumbing and Drainage</p>	

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Brought Forward				R
<u>Stainless steel basins, sinks, wash troughs, urinals, etc.</u>				
Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable				
<u>Waste unions</u>				
Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings				
<u>Note:</u> All specifications must be adhered to or equivalent to principal agents approval.				
<u>Product Specifications</u>				
Where a brand name is mentioned, "similar approved" by the project manager can be priced				
<u>RAINWATER DISPOSAL</u>				
<u>Seamless aluminium prepainted gutters and rainwater pipes</u>				
1	125 x 85mm x 0,6mm Thick Ogee gutter including brackets fixed to fibre cement fascias	m	52	
2	Extra over gutter for stopped end	No	10	
3	Extra over gutter for outlet for 76mm	No	12	
4	Extra over gutter for angle	No	6	
<u>'Marley Vynadeep' uPVC or similar approved:</u>				
5	75mm Diameter rainwater pipes	m	24	
6	Extra over rainwater pipe for shoe	No	12	
7	Extra over rainwater pipe for eaves or plinth offset	No	12	
8	Spreader for 75mm pipe	No	6	
Carried Forward				R
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Brought Forward			R
<u>SANITARY FITTINGS</u>			
<u>"Franke" or similar approved</u>			
9	1200 x 535mm "Trendline 721" double end bowl sink fixed to countertop with clear silicone	No	1
<u>White glazed vitreous china fittings including assembling and fixing in position, expanding bolts and mortices in brick or concrete walls, connecting up, etc.</u>			
10	575 x 455mm, "Weaver" white vitreous china basin (code 704201WH) with one taphole, including integrated overflow and chainstay	No	2
11	"Cobra Welcome" Close coupled toilet suite. Top, dual flush capability with 3L and 6L flush available. Box rim. Package cistern and cistern fittings, pan, seat and cover, connector and installation manual. Cistern manufactured with left hand side inlet hole only as per European standard.	No	2
<u>"Libra" or similar approved:</u>			
12	1 000 x 1 000 x 150mm "Cola 90°" white acrylic shower tray, set in cement mortar bedding and pointed all around with mildew resistant silicon sealant	No	2
13	1800 X 900mm "Libra Widestar" rectangular built-in bath	No	1
<u>WASTE UNIONS ETC</u>			
<u>"Cobra" Watertech</u>			
14	32mm "302-32" Slotted Basin waste	No	2
15	38mm "316" Sink waste union	No	1
16	"309-32" Anti Theft Plug fitted to unslotted basin waste (waste elsewhere)	No	2
17	50mm Brass shower waste with 75mm diameter chrome plated shower grating (VA3.334-4)	No	2
18	40mm CP "318" Bath waste unslotted clicker.	No	1
Carried Forward			R
Building Works - 85 Units Bill No.13 - Plumbing and Drainage			

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	Brought Forward		R	
	PVC			
19	50mm Deep seal P-trap	No	1	
	"Franke" or similar approved			
20	Spazio 2 plumbing kit	No	1	
	"Cobra Watertech"			
21	32mm "345/50 CP" bottle trap	No	2	
22	38mm "373" Shower P-trap with chrome plated grating	No	2	
	TAPS, VALVES, ETC			
	Brass			
23	22mm Stopcock	No	2	
	"Cobra" or similar approved			
24	15mm Chrome plated angle regulating valve with 350mm long flexible service connection (product code 832/350F)	No	8	
25	15mm Chrome plated 'Star' underwall F x F stoptap (product code FSTCF2C1-7FT01)	No	4	
26	Chrome Plated Nile Basin Mixer NL-951 (Product Code FBN1D1NI-0GT0426)	No	2	
27	Chrome Plated Nile Deck Type Sink Mixer NL-970 (Product Code FBN1D1NI-0GT0426)	No	1	
28	Nile exposed bath mixer (no hand shower) single lever with diverter (Product Code FBHEW2NI-0GT0426)	No	1	
29	15mm Rough brass hose bibtap with 20mm BSP hose union (product code 108-15)	No	2	
	"Grohe" or similar approved			
30	Tempesta cosmopolitan 100 head shower set (Product Code G-26090001)	No	2	
	Carried Forward			R
	Building Works - 85 Units Bill No.13 - Plumbing and Drainage			

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	Brought Forward			R
31	BauEdge Single-Lever Shower Mixer (Product Code G-29040001)	No	2	
	<u>SANITARY PLUMBING</u>			
	<u>PVC-U soil and vent pipes</u>			
32	40mm Pipes	m	8	
33	50mm Pipes	m	8	
34	Not exceeding 50mm pipes chased into brickwork (pipe elsewhere)	m	8	
	<u>Extra over PVC-U soil and vent pipes for fittings</u>			
35	50mm "GI Two-Way" vent valve.	No	2	
36	50mm BSP adaptor	No	2	
37	110mm Pan connector	No	2	
38	40mm Bend or junction	No	3	
39	50mm Bend or junction	No	3	
40	110mm Bend or junction	No	2	
	<u>WATER SUPPLIES</u>			
	<u>Pex-Al-Pex or equal approved multilayer pipe for hot water & heating with press fittings</u>			
41	15mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	34	
42	20mm Pipes, ditto	m	23	
	<u>Extra over press fittings</u>			
43	16mm Fittings	No	14	
44	20mm Fittings	No	9	
	Carried Forward			R
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	Brought Forward			R
	<u>Class 2 copper pipes with brass compression couplings</u>			
45	22mm Pipe,Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases) including brown paper lagging, in concrete, etc.	m	29	
	<u>Extra over Class 2 copper pipes for brass compression fittings</u>			
46	22mm Fittings	No	9	
	<u>Brass fittings including couplings to copper</u>			
47	22mm Hose bibtap as Cobra 108 including wallplate elbow plugged to wall	No	2	
48	15mm Stopcock as Cobra 131	No	2	
49	22mm Non-return valve	No	1	
50	22mm Pressure reducing valve	No	1	
51	22mm In-line strainer	No	1	
52	22mm Vacuum breaker	No	2	
53	22mm Automatic air vent/valve	No	1	
54	22mm Pressure safety valve	No	1	
55	PA1.1RB "Kwikflo" 400 kPa pressure reducing valve	No	1	
56	150l Electric Geyser 400kPa horizontally mounted with TP Safety Valve installed complete, including brass pressure reducing/expansion relieve valve, No.2 vacuum breaker and connecting to supply and outlet pipes and electrical supply	No	1	
57	Drip Tray to suit 150l HWC, including 3m long 40mm uPVC overflow pipe	No	1	
58	Insulation Blanket for 150l HWC	No	1	
	Carried Forward			R
	Building Works - 85 Units Bill No.13 - Plumbing and Drainage			

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	Brought Forward			R
59	Supply and Install "Alliance ALLHT35R134" 3.5 kW Heat Pump complete, including controller, interconnecting piping and cabling, including galvanised brackets	No	1	
	<u>FIRE APPLIANCES ETC</u>			
60	4,5Kg dry chemical powder fire extinguisher plus painted back board	No	1	
	<u>PIPE INSULATION</u>			
	<u>Thermaflex Preformed Polyethylene foam lagging</u>			
61	Thermaflex preformed polyethylene foam lagging or similar approved insulation wrapped around 15mm pipe and fittings	m	21	
62	Ditto, but around 22mm pipe	m	31	
	<u>TESTING</u>			
63	Test hot & cold water pipe system		Item	
64	Test waste pipe system		Item	
65	Supply and handing over of detailed as-built drawings of the plumbing and drainage works as per the approved design and supply provided		Item	
Carried Forward to Summary of Section No. 3				R
Building Works - 85 Units				
Bill No.13 - Plumbing and Drainage				

Item No	Quantity	Rate	Amount
<p><u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u></p> <p><u>BILL NO.14 - ELECTRICAL WORK</u></p> <p><u>(CPAP WORK GROUP 160 UNLESS OTHERWISE STATED)</u></p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Supplementary Preambles</u></p> <p><u>Specifications, drawings, etc.:</u></p> <p>Tenderers are referred to the specification accompanying these bills of quantities for the electrical work, for the full descriptions of the following items which are to be read and priced in conjunction with the said specification</p>			
Carried Forward		R	
<p>Building Works - 85 Units</p> <p>Bill No.14 - Electrical Work</p>			

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Brought Forward	R	
<p><u>Distribution boards, etc:</u></p> <p>Rates for distribution boards etc are to include for busbars, jumpers, neutral bars, internal wiring and connections, circuit identification markers, control gear labels, circuit legend cards and working drawings</p> <p><u>Switches, socket outlets, etc:</u></p> <p>Rates for switches, socket outlets, etc are to include for screwing to outlet boxes, connecting up and cover plates</p> <p><u>Light fittings:</u></p> <p>Rates for light fittings are to include for hanging, fixing and connecting and for lamp holders and fluorescent tubes and lamps of the type and wattage described</p> <p><u>Liaison with Local Authority</u></p> <p>Liaise with the Local Authority with regard to compliance with the National Building Regulations, Local By-laws and any other Statutory Regulations.</p> <p><u>Concurrent with Building Work:</u></p> <p>The electrical work in this service shall be carried out concurrently with the building work. The electrical contractor shall liaise closely with the building contractor</p> <p><u>Handing over existing materials:</u></p> <p>Where certain materials or articles are described as to be handed over by the contractor to the Department's Representative or Representative/Agent such materials or articles shall be properly stored by the contractor until handing over thereof. The contractor must obtain an official receipt listing the materials or articles and dates of handover. If the contractor fails to submit the receipt when requested to do so it shall be deemed that the materials or articles are still in his possession and he will be held liable to the Department for the full replacement value thereof which amount will be deducted from any monies due to the contractor.</p>		
Carried Forward	R	
<p>Building Works - 85 Units</p> <p>Bill No.14 - Electrical Work</p>		

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Brought Forward			R
<u>ELECTRICAL INSTALLATION</u>			
Budgetary allowance for the complete electrical installation including power skirting or rails, light fittings, etc and builder's work but excludes primary transformers			
1	Wiring and accessories	PS	35,000.00
2	Lighting and accessories	PS	35,000.00
3	Socket outlets	PS	6,000.00
4	Isolators	PS	3,500.00
5	Distribution boards complete with essential and non-essential switchgear and accessories	PS	5,500.00
6	Labelling sum	PS	3,000.00
7	Intruder alarm detection	PS	15,000.00
8	Intercom/access control	PS	7,500.00
Carried Forward to Summary of Section No. 3			R
Building Works - 85 Units			
Bill No.14 - Electrical Work			

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u> <u>BILL NO.15 - MECHANICAL WORK</u> <u>(CPAP WORK GROUP 170 UNLESS OTHERWISE STATED)</u> NOTE The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager. <u>Preambles</u> The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards. Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications. The Standard Preambles and the Notes in the various trade bills are to apply equally to this section. <u>MECHANICAL SERVICES</u> <u>FANS (Supply and Install, including anti vibration mountings, canvas collars and brackets)</u>			
1	Supply and install bathroom extraction fans "Xpelair BX100C" or similar complete with ducting and grilles as supplied.	No	2	
	Carried Forward		R	
	Building Works - 85 Units Bill No.15 - Mechanical Work			

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Brought Forward			R
<u>WEATHER LOUVRES AND DOOR GRILLES ("AGS TROX")</u>			
2	Door grill, 300x300	No	3
3	Weatherproof wall grill louvre 600x600mm	No	1
Carried Forward to Summary of Section No. 3 Building Works - 85 Units Bill No.15 - Mechanical Work			R

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u></p> <p><u>BILL NO.16 - GLAZING</u></p> <p><u>(CPAP WORK GROUP 150 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Float glass</u></p> <p>The term "float glass" is used for monolithic annealed glass</p>			
	Carried Forward		R	
	<p>Building Works - 85 Units</p> <p>Bill No.16 - Glazing</p>			

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Brought Forward			R
<u>Laminated glass</u>			
Laminated glass to have polyvinyl butyral (PVB) interlayer(s)			
<u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u>			
<u>5mm Silvered float glass copper backed mirrors with polished edges, holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete</u>			
1	Mirror 600 x 900mm high with four screws	No	1
2	Mirror 800 x 1200mm high with six screws	No	1
Carried Forward to Summary of Section No. 3			R
Building Works - 85 Units			
Bill No.16 - Glazing			

Item No	Quantity	Rate	Amount
<p><u>SECTION NO. 3</u></p> <p><u>BILL NO.17 - PAINTWORK</u></p> <p><u>(CPAP WORK GROUP 152 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
<p>Carried Forward</p> <p>Building Works - 85 Units Bill No.17 - Paintwork</p>		R	

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Brought Forward				R
<u>Supplementary Preambles</u>				
<u>Colours</u>				
Unless otherwise described paintwork on ceilings shall be deemed to be in the "White" colour group and paintwork on all other components shall be deemed to be in the "Pastel" colour group in accordance with the Natural Colour System (NCS) adopted by the SA National Standards				
<u>PAINTWORK ETC TO NEW WORK</u>				
<u>ON INTERNAL FLOATED PLASTER SURFACES</u>				
<u>One coat alkali resistant primer and two coats premium quality ultra matt, fully washable and stain resistant acrylic emulsion paint for interior use</u>				
1	Walls	m2	19	
<u>ON EXTERNAL FLOATED PLASTER SURFACES</u>				
<u>One coat alkali resistant primer and two coats extremely durable UV-resistant waterbased mica reinforced fine textured acrylic paint</u>				
2	Walls	m2	99	
<u>ON EXTERNAL TEXTURED PLASTER SURFACES</u>				
<u>One coat alkali resistant primer and two coats extremely durable UV-resistant waterbased mica reinforced fine textured acrylic paint</u>				
3	Walls	m2	66	
4	Mouldings and bands picked out in colours differing from surrounding work	m2	33	
Carried Forward				R
Building Works - 85 Units Bill No.17 - Paintwork				

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Brought Forward			R
<u>ON INTERNAL GYPSUM PLASTER SURFACES</u>			
<u>One coat alkali resistant primer and two coats premium quality ultra matt, fully washable and stain resistant acrylic emulsion paint for interior use</u>			
5	Skimmed plasterboard ceilings	m2	89
6	Walls	m2	82
<u>ON FIBRE-CEMENT BOARD SURFACES</u>			
<u>One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use</u>			
7	Ceilings and cornices, including priming metal cover strips and nailheads	m2	19
<u>Two coats extremely durable UV-resistant, washable pure acrylic emulsion sheen paint</u>			
8	Fascias and barge boards, including priming metal jointing strips	m2	18
<u>ON METAL SURFACES</u>			
<u>Remove all traces of protective coating from galvanised surfaces with galvanised iron cleaner and apply one coat self etching primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on galvanised steel</u>			
9	Door frames	m2	2
10	Gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	32
<u>ON WOOD SURFACES</u>			
<u>Two coats oil wood primer</u>			
11	Backs of frames, linings, etc not exceeding 300mm wide	m	70
Carried Forward			R
Building Works - 85 Units Bill No.17 - Paintwork			

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Brought Forward			R
	<u>One coat primer and two coats premium quality polyurethane enamel paint</u>		
12	Doors	m2	14
13	Skirtings, rails, etc not exceeding 300mm girth	m	70
Carried Forward to Summary of Section No. 3			R
Building Works - 85 Units			
Bill No.17 - Paintwork			

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Item No		Quantity	Rate	Amount
<u>SECTION NO. 3 - BUILDING WORKS - 85 UNITS</u>				
<u>BILL NO.18 - PROVISIONAL AMOUNTS</u>				
<u>Provisional Sum for Four plate stove</u>				
1	Provide the sum of R20,000.00 (Twenty Thousand Rands) for four plate stove.	PS		20,000.00
2	Contractors Markup		%	
<u>Provisional Sum for Wall mounted folded Washing line</u>				
3	Provide the sum of R3,000.00 (Three Thousand Rands) for wall mounted washing lines.	PS		3,000.00
4	Contractors Markup		%	
<u>Provisional Sum for Bedroom & kitchen joinery</u>				
5	Provide the sum of R80,000.00 (Eighty Thousand Rands) for bedroom and kitchen joinery.	PS		80,000.00
6	Contractors Markup		%	
<u>Provisional Sum for Geotechnical Investigation</u>				
7	Provide the sum of R5,000.00 (Five Thousand Rands) per unit per geotechnical investigation.	PS		5,000.00
8	Contractors Markup		%	
<u>Provisional Sum for pergolas</u>				
9	Provide the sum of R19,250.00 ((Nineteen Thousand Two Hundred and Fifty Rand) for pergolas	PS		19,250.00
10	Contractors Markup		%	
Carried Forward			R	
Building Works - 85 Units Bill No.18 - Provisional Amounts				

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Brought Forward			R
<u>Provisional Sum for steel carports per unit</u>			
11	Provide the sum of R9,000.00 (Nine Thousand Rand) for a steel carports	PS	9,000.00
12	Contractors Markup		%
<u>Provisional Sum for plan scrutiny fees unit</u>			
13	Provide the sum of R13,000.00 (Thirteen Thousand Rand) for plan scrutiny fees per unit	PS	13,000.00
14	Contractors Markup		%
<u>Provisional Sum for N.H.B.R.C enrolment certificate per unit.</u>			
15	Provide the sum of R 33,500.00 (Thirty Three Thousand, Five Hundred) for N.H.B.R.C enrolment certificates per unit	PS	33,500.00
16	Contractors Markup		%
<u>Provisional Sum for decanting</u>			
17	Provide the sum of R9,000.00 (Nine Thousand Rand) for decanting per unit.	PS	9,000.00
18	Contractors Markup		%
Carried Forward to Summary of Section No. 3			R
Building Works - 85 Units			
Bill No.18 - Provisional Amounts			

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Building Works - 85 Units				
<u>SECTION SUMMARY - Building Works - 85 Units</u>				
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6	Bill No.6 - Carpentry and Joinery	40		
7	Bill No.7 - Ceilings	43		
8	Bill No.8 - Floor Coverings, etc	47		
9	Bill No.9 - Ironmongery	50		
10	Bill No.10 - Metalwork	55		
11	Bill No.11 - Plastering	58		
12	Bill No.12 - Tiling	61		
13	Bill No.13 - Plumbing and Drainage	69		
14	Bill No.14 - Electrical Work	72		
15	Bill No.15 - Mechanical Work	74		
16	Bill No.16 - Glazing	76		
17	Bill No.17 - Paintwork	80		
18	Bill No.18 - Provisional Amounts	82		
	SUBTOTAL		R	
	Multiplied by an additional 84 Units	No 84		
	Carried Forward		R	
	Building Works - 85 Units			

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	Building Works - 85 Units			
Bill No	<u>SECTION SUMMARY - Building Works - 85 Units</u>		Page No	Amount
	Brought Forward			
	SUBTOTAL FOR 85 UNITS			
	Carried to Final Summary			
	Building Works - 85 Units			

ACACIA PARK
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CONSTRUCTION OF REPLACEMENT ACCOMODATION &
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Brought Forward	R
<p><u>Subterranean water</u></p> <p>The nature of the ground is unknown and the contractor is to make his own assessment and due allowance for same</p> <p><u>Carting away of excavated material</u></p> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p> <p><u>Working Space</u></p> <p>Working space for any work requiring formwork, brick linings, etc, has been determined by the following conditions and shall be measured where:</p> <ol style="list-style-type: none"> 1. The depth of the excavation does not exceed 1000mm and the distance from the finished face of the structure to the excavated face is less than 250mm for formwork or 600mm for brick linings and 2. The depth of the excavation exceeds 1000mm and the distance from the finished face of the structure to the excavated face is less than 600mm <p><u>Filling and layer work materials</u></p> <p>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</p> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series</p>	
Carried Forward	R
<p>External/Civil Works - 85 Units</p> <p>Bill No.1 - External Works</p>	

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Brought Forward				R
<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>Precast concrete block road surfacing</u>				
Paving shall be laid in accordance with SABS 1200 MJ, SANS 1058 and the Concrete Masonry Association's specifications				
<u>SITE CLEARANCE (CPAP WORK GROUP 104)</u>				
<u>Site clearance</u>				
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m2	80	
<u>FILLING, ETC (CPAP WORK GROUP 104)</u>				
<u>G5 Earth filling from commercial sources supplied by the Contractor in accordance with SABS 1200 DM, compacted to 95% Mod AASHTO density</u>				
2	Base/Sub-Base layers	m3	15	
<u>G7 Earth filling from commercial sources supplied by the Contractor in accordance with SABS 1200 DM, compacted to 98% Mod AASHTO density</u>				
3	Over site to make up levels	m3	15	
<u>Compaction of surfaces</u>				
4	Compaction of natural or excavated ground surface under parking areas etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density	m2	100	
<u>Prescribed density tests on filling:</u>				
5	"Modified AASHTO Density" test	No	5	
Carried Forward				R
External/Civil Works - 85 Units Bill No.1 - External Works				

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Brought Forward			R
<u>CONCRETE, FORMWORK & REINFORCEMENT</u>			
<u>REINFORCED CONCRETE (CPAP WORK GROUP 110)</u>			
<u>25MPa/19mm concrete</u>			
6	Surface beds or paving cast in panels on waterproofing	m3	1
<u>TEST CUBES</u>			
7	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	2
<u>CONCRETE SUNDRIES</u>			
<u>Finishing top surfaces of concrete to an evenly ribbed non-slip surface</u>			
8	Pavings to falls	m2	10
<u>ROUGH FORMWORK (DEGREE OF ACCURACY II) (CPAP WORK GROUP 111)</u>			
<u>Rough formwork to sides</u>			
9	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	12
<u>MOVEMENT JOINTS ETC</u>			
<u>Expansion joints with 10mm bitumen impregnated softboard between vertical concrete surfaces, including necessary formwork</u>			
10	Vertical not exceeding 300mm wide	m	12
<u>REINFORCEMENT (CPAP WORK GROUP 114)</u>			
<u>Fabric reinforcement</u>			
11	Type 193 fabric reinforcement in concrete surface beds etc	m2	10
Carried Forward			R
External/Civil Works - 85 Units Bill No.1 - External Works			

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Brought Forward			R
<u>PAVING ETC (CPAP WORK GROUP 118)</u>			
<u>Allow the prime cost amount of R200/m2 (two hundred Rand) for the supply and delivery to site of paving of 450 x 450 x 50mm precast concrete block paving slabs laid on 30mm thick river sand bed</u>			
12	Paving of slabs laid with 25mm wide joints jointed with mortar and flush pointed, laid to falls.	m2	75
<u>Precast concrete kerbs finished smooth on exposed surfaces, bedded on a 50mm thick x 175mm wide layer of unreinforced concrete with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint and jointed in 3.1 cement mortar, including excavation, backfilling, etc</u>			
13	75 x 150mm High kerbs (E1/SANS 927 fig 11)	m	35
<u>ROOT BARRIERS</u>			
14	Biobarrier' or similar 750mm deep vertical root barriers.	m	90
Carried Forward to Summary of Section No. 4			
External/Civil Works - 85 Units			R
Bill No.1 - External Works			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 4 - EXTERNAL/CIVIL WORKS</u> <u>- 85 UNITS</u></p> <p><u>BILL NO.2 - PLUMBING AND DRAINAGE</u></p> <p><u>(CPAP WORK GROUP 146 and 148 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Wire gratings</u></p> <p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings</p>			
	<p style="text-align: right;">Carried Forward</p> <p>External/Civil Works - 85 Units Bill No.2 - Plumbing and Drainage</p>		R	

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Brought Forward		R
<p><u>Stormwater channels</u></p> <p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc, and disposal of surplus material on site</p> <p><u>Exposed concrete surfaces</u></p> <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> <p><u>Sealing of edges</u></p> <p>Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone</p> <p><u>Reducing fittings</u></p> <p>Where fittings have reducing ends or branches they are described as "reducing" and 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</p> <p><u>uPVC pipes and fittings</u></p> <p>Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings</p> <p>Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings</p> <p><u>uPVC pressure pipes and fittings</u></p> <p>Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings</p> <p>Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints</p>		
Carried Forward		R
<p>External/Civil Works - 85 Units</p> <p>Bill No.2 - Plumbing and Drainage</p>		

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CONSTRUCTION OF REPLACEMENT ACCOMODATION &
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Brought Forward	R
<p><u>High density polyethylene (HDPE) pipes and fittings</u></p> <p>Pipes shall be type IV and of the class specified with "Plasson" or "Alprene" compression fittings</p> <p><u>"Polycop" polypropylene pipes</u></p> <p>Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings</p> <p>Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions</p> <p><u>Copper pipes</u></p> <p>Pipes shall be hard drawn and half-hard "Maksal" pipes of the class described. 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. Capillary solder fittings shall comply with ISO 2016</p> <p>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</p> <p><u>Fixing of pipes</u></p> <p>Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc, casting in, building in or suspending not exceeding 1m below suspension level</p>	
Carried Forward	R
<p>External/Civil Works - 85 Units</p> <p>Bill No.2 - Plumbing and Drainage</p>	

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DEMOLITION OF 113 ACCOMODATION STRUCTURES
CONSTRUCTION OF REPLACEMENT ACCOMODATION &
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Brought Forward	R
<p><u>Stainless steel basins, sinks, wash troughs, urinals, etc</u></p> <p>Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)</p> <p>Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)</p> <p>Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)</p> <p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable</p> <p><u>Paper wrapping to pipes</u></p> <p>Pipes chased into brickwork must be wrapped with two layers of stout brown paper tied with wire. Rates are to include for wrapping around joints and fittings</p> <p><u>Laying, backfilling, bedding, etc of pipes</u></p> <p>Pipes shall be laid and bedded in accordance with manufacturers' instructions and trenches shall be carefully backfilled</p> <p><u>Filling and bedding material</u></p> <p>Selected Fill Material: Selected material shall be material that has a P.I not greater than 6, is free from vegetation and from lumps and stones of diameter > 30mm. This material shall be used for the selected fill blanket</p> <p>Selected Granular Material: Selected granular material shall be of a granular, non-cohesive nature that is singularly graded between .6mm and 19mm, free draining, has a compact ability factor not exceeding .4 or such similar value as is laid down in project specification. For PVC and uPVC the factor is not to exceed the following; 1) 0.1 - Material suitable for all ground conditions 2) 0.3 - Material suitable provided extra care is taken during compaction operation</p>	
Carried Forward	R
<p>External/Civil Works - 85 Units Bill No.2 - Plumbing and Drainage</p>	

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DEMOLITION OF 113 ACCOMODATION STRUCTURES
CONSTRUCTION OF REPLACEMENT ACCOMODATION &
ASSOCIATED INFRASTRUCTURE

Brought Forward				R
<p>Joints:</p> <p>To ensure that each pipe will be fully supported throughout the length of its barrel on the bedding cradle, joint pockets/ holes shall be formed in the bedding cradle for pipe sockets</p> <p>All work below ground shall be carried out in accordance with SANS 1200DB, SANS 1200LB, SANS 1200LD and SANS 1200LE</p> <p><u>General</u></p> <p>Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc and to steel pipes (adaptors for connections to copper pipes, etc are given separately)</p> <p>Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured)</p> <p><u>EARTHWORKS (STORMWATER, SUBSOIL DRAINAGE, STORMWATER DRAINAGE, SLEEVES FOR ELECTRICAL AND TELEPHONE CABLES ETC, SOIL DRAINAGE AND WATER SUPPLIES) (CPAP WORK GROUP 146)</u></p> <p><u>Excavation in earth</u></p>				
1	Excavation in earth not exceeding 1m deep for pipe or cable trenches or chambers including risk of collapse of excavations	m3	60	
2	Excavation in earth exceeding 1m but not exceeding 2m deep for pipe or cable trenches or chambers including risk of collapse of excavations	m3	72	
3	Extra over excavation in earth for pipe and cable trenches or chambers for excavation in soft rock	m3	13	
4	Extra over excavation in earth for pipe and cable trenches or chambers for excavation in hard rock	m3	7	
Carried Forward				R
<p>External/Civil Works - 85 Units</p> <p>Bill No.2 - Plumbing and Drainage</p>				

**ACACIA PARK
DEMOLITION OF 113 ACCOMODATION STRUCTURES
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Brought Forward			R
5	Extra over excavation for pipe and cable trenches or chambers for carting away surplus material to a dumping site located by the contractor (This rate 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, and spoiled at a site located by the contractor not exceeding 10km in one direction from the site.	m3	48
6	Extra over carting away of surplus material further than 10km in one direction from the site	m3	32
7	Earth filling supplied by contractor to pipe or cable trenches or chambers	m3	26
8	Earth filling supplied by contractor to pipe or cable trenches compacted or chambers to 95% Mod AASHTO density	m3	26
9	Imported granular filling in bedding under and filling around pipes	m3	5
10	Imported sand filling in bedding under and filling around pipes	m3	10
<u>CONCRETE (STORMWATER, SUBSOIL DRAINAGE, STORMWATER DRAINAGE, SLEEVES FOR ELECTRICAL AND TELEPHONE CABLES ETC, SOIL DRAINAGE AND WATER SUPPLIES)</u>			
11	15MPa/19mm Concrete in encasing to not exceeding 110mm diameter horizontal pipe of a minimum thickness of 150mm around pipe, including all necessary casing	m	24
12	15MPa/19mm Concrete in encasing to not exceeding 110mm diameter horizontal bend or junction of a minimum thickness of 150mm around fitting, including all necessary casing	No	15
13	15MPa/19mm Concrete in thrust block (approximately 0,06 cubic metres) at bends, etc., including casing	No	10
Carried Forward			R
External/Civil Works - 85 Units Bill No.2 - Plumbing and Drainage			

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	Brought Forward			R
	<u>PRECAST CONCRETE CHANNELS (CPAP WORK GROUP 112)</u>			
	<u>Lay new precast concrete channels (laid on a concrete bedding)</u>			
14	260 x 140mm Channel with 150 x 75mm deep segmental channel	m	20	
	<u>SLEEVES FOR ELECTRICAL AND TELEPHONE CABLES ETC (CPAP WORK GROUP 171)</u>			
	<u>Class 6 PVC-U pipes</u>			
15	50mm Pipes laid in trenches (trenches elsewhere)	m	40	
	<u>Extra over Class 6 PVC-U pipes for fittings</u>			
16	50mm Long radius bend	No	4	
	<u>Draw wires</u>			
17	1,6mm Galvanised steel draw wires in pipes	m	40	
	<u>SOIL DRAINAGE (CPAP WORK GROUP 146)</u>			
	<u>Normal duty PVC-U sewer channels</u>			
18	110mm Channels in bottoms of inspection chambers	m	1	
	<u>Extra over normal duty PVC-U sewer channels for fittings</u>			
19	110mm Bend	No	2	
20	110mm Double junction	No	1	
	<u>Heavy duty (Class 34) PVC-U sewer and drain pipes</u>			
21	110mm Pipes vertically or ramped to cleaning eyes etc (no excavation)	m	3	
22	110mm Pipes laid in trenches (trenches elsewhere)	m	20	
23	160mm Pipes, ditto	m	20	
	Carried Forward			R
	External/Civil Works - 85 Units Bill No.2 - Plumbing and Drainage			

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Brought Forward			R
<u>Extra over heavy duty (Class 34) PVC-U sewer and drain pipes for fittings</u>			
24	110mm Bend	No	3
25	160mm Bend	No	2
26	110mm Junction	No	1
27	160mm Junction	No	1
28	160mm Reducing junction	No	1
29	110mm Access bend	No	2
30	110mm Access junction	No	1
31	160mm Reducing junction	No	2
32	110mm Rodding eye	No	2
<u>uPVC gulleys</u>			
33	110mm Gully exceeding 500mm and not exceeding 750mm deep	No	2
<u>Precast concrete circular inspection chambers including precast concrete cover slabs (cast iron covers and frames elsewhere) and channels in benching:</u>			
34	1000mm Diameter inspection chamber not exceeding 1m deep internally	No	1
35	Ditto, but exceeding 1,5m not exceeding 2m deep	No	1
36	Ditto, but exceeding 2m not exceeding 2.5m deep	No	1
<u>Gratings, covers, etc:</u>			
37	Type 2A 635mm diameter cast iron manhole cover and frame	No	3
38	Lifting-key for manhole cover (handed to Employer)	No	3
Carried Forward			R
External/Civil Works - 85 Units Bill No.2 - Plumbing and Drainage			

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	Brought Forward	R	
	<u>Testing:</u>		
39	Testing soil drainage system	Item	
	<u>WATER SUPPLIES (CPAP WORK GROUP 148)</u>		
	<u>Class 12 HDPe type V pipes</u>		
40	20mm Pipes laid in trenches (trenches elsewhere).	m	15
41	32mm Pipes, ditto	m	25
	<u>Extra over Class 12 HDPe type V pipes for "Compression Type" fittings</u>		
42	20mm Fittings	No	4
43	32mm Reducer	No	1
44	32mm Elbow	No	2
45	32mm T	No	1
	<u>TAPS, VALVES, ETC</u>		
	<u>Brass</u>		
46	22mm Stopcock	No	2
47	35mm Stopcock	No	1
	<u>Sundries</u>		
48	210 x 340mm Water meter box	No	1
	<u>IRRIGATION WATER SUPPLY (CPAP WORK GROUP 148)</u>		
	<u>Class 3 LDPE type pipes</u>		
49	12mm Pipes laid in trenches (trenches elsewhere).	m	30
	Carried Forward		R
	External/Civil Works - 85 Units Bill No.2 - Plumbing and Drainage		

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Brought Forward				R
<u>Extra over Class 3 LDPE type pipes for "Compression Type" fittings</u>				
50	12mm Couplings	No	3	
51	12mm Elbows	No	4	
52	12mm T-Piece	No	2	
53	End plug	No	2	
<u>TAPS, VALVES, ETC</u>				
<u>Brass</u>				
54	12mm Brass nickle plated ball valve	No	1	
<u>PVC</u>				
55	12mm PVC Threaded ball valve	No	2	
<u>Sundries</u>				
56	210 x 340mm Water meter box	No	1	
Carried Forward to Summary of Section No. 4				R
External/Civil Works - 85 Units				
Bill No.2 - Plumbing and Drainage				

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 5 - SITE ELECTRICAL RETICULATION - 85 UNITS</u></p> <p><u>BILL NO.1 - SITE ELECTRICAL RETICULATION</u></p> <p><u>(CPAP WORK GROUP 160 and 162 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
	Carried Forward		R	
	<p>Site Electrical Reticulation - 85 Units</p> <p>Bill No.1 - Site Electrical Reticulation</p>			

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Brought Forward	R
<p><u>Supplementary Preambles</u></p> <p><u>Specifications, drawings, etc.:</u></p> <p>Tenderers are referred to the specification accompanying these bills of quantities for the electrical work, for the full descriptions of the following items which are to be read and priced in conjunction with the said specification</p> <p><u>Distribution boards, etc:</u></p> <p>Rates for distribution boards etc are to include for busbars, jumpers, neutral bars, internal wiring and connections, circuit identification markers, control gear labels, circuit legend cards and working drawings</p> <p><u>Switches, socket outlets, etc:</u></p> <p>Rates for switches, socket outlets, etc are to include for screwing to outlet boxes, connecting up and cover plates</p> <p><u>Light fittings:</u></p> <p>Rates for light fittings are to include for hanging, fixing and connecting and for lamp holders and fluorescent tubes and lamps of the type and wattage described</p> <p><u>Liaison with Local Authority</u></p> <p>Liaise with the Local Authority with regard to compliance with the National Building Regulations, Local By-laws and any other Statutory Regulations.</p> <p><u>Concurrent with Building Work:</u></p> <p>The electrical work in this service shall be carried out concurrently with the building work. The electrical contractor shall liaise closely with the building contractor</p>	
Carried Forward	R
<p>Site Electrical Reticulation - 85 Units</p> <p>Bill No.1 - Site Electrical Reticulation</p>	

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Brought Forward			R
<u>Handing over existing materials:</u>			
Where certain materials or articles are described as to be handed over by the contractor to the Department's Representative or Representative/Agent such materials or articles shall be properly stored by the contractor until handing over thereof. The contractor must obtain an official receipt listing the materials or articles and dates of handover. If the contractor fails to submit the receipt when requested to do so it shall be deemed that the materials or articles are still in his possession and he will be held liable to the Department for the full replacement value thereof which amount will be deducted from any monies due to the contractor.			
<u>Low Voltage Cables Armoured</u>			
1	16 mm ² Cu x 2 core with 1mm ² Pilot wires	m	4,250
2	16 mm ² Cu x 2 core	m	1,800
3	70mm ² Al x 4 core	m	300
4	120mm ² Al x 4 core	m	1,100
5	Terminations	No	1
<u>Distribution Kiosk</u>			
<u>Supply and install 12 Way Double door 3CR12 Steel Distribution Kiosk including all internal wiring, bus bars, circuit breakers, all labelling and accessories, with vermin proofing as specified. Kiosks to be pre-wired for split prepayment meter installation, meter installation by Others</u>			
6	12 Way double door 3CR12 Steel Kiosk with 10 x 63A QF-1(26)-C1 6kA Curve 1 Single Pole MCB's as per CoCT Specification	No	3
7	12 Way double door 3CR12 Steel Kiosk with 9 x 63A QF-1(26)-C1 6kA Curve 1 Single Pole MCB's as per CoCT Specification	No	3
8	Single-phase Prepaid billing meter complete 80A	No	85
Carried Forward			R
Site Electrical Reticulation - 85 Units Bill No.1 - Site Electrical Reticulation			

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		Brought Forward		R
9	User/keypad 80A	No	85	
10	Labelling sum	No	1	
	<u>Streetlighting</u>			
	<u>Comprises floodlighting, sundry builder's work, etc.</u>			
11	BEKASStar - 47W LED	No	1	
12	BEKARay - 47W LED	No	20	
13	LUCCA Post Top - 45W-LED	No	1	
14	6,3m Galvanised Steel pole	No	11	
15	16mm ² Al 2-Core	No	550	
16	Terminations	No	1	
17	Streetlighting control	No	6	
18	Labelling sum	No	1	
	<u>Earthing & Bonding</u>			
19	Steel reinforced 1,8m copper earth spikes and brass coupling wiSteel reinforced 1,8m copper earth spikes and brass coupling with driving capth driving cap	No	24	
20	70mm ² BCE wiring	m	250	
21	Termination of 70mm ² on copper spike and earth bar	m	48	
22	Earthing and Bonding of a unit or residential installation including all equipment to bond water pipes and the like in compliance with SANS 10142, the General Specification, the Code of Practice and the Local Supply Authorities as per the Statutory requirements IRO Wiring of Premises. Rate measured as per unit	No	85	
23	2,5mm ² BCE wiring	m	1,000	
24	4mm ² BCE wiring	m	1,000	
	Carried to Final Summary			R
	Site Electrical Reticulation - 85 Units			
	Bill No.1 - Site Electrical Reticulation			

**ACACIA PARK
DEMOLITION OF 113 ACCOMODATION STRUCTURES
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[illegible]

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 6 - LANDSCAPING AND PAVING - 85 UNITS</u></p> <p><u>BILL NO.1 - LANDSCAPING AND PAVING</u></p> <p><u>(CPAP WORK GROUP 104, 110, 111,112, 114, 118,& 154)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Nature of ground</u></p> <p>The nature of the ground is unknown and the contractor is to make his own assessment and due allowance for same</p>			
	<p style="text-align: right;">Carried Forward</p> <p>Landscaping and Paving - 85 Units Bill No.1 - Landscaping and Paving</p>		R	

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Brought Forward	R
<p><u>Subterranean water</u></p> <p>The nature of the ground is unknown and the contractor is to make his own assessment and due allowance for same</p> <p><u>Carting away of excavated material</u></p> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p> <p><u>Working Space</u></p> <p>Working space for any work requiring formwork, brick linings, etc, has been determined by the following conditions and shall be measured where:</p> <ol style="list-style-type: none"> 1. The depth of the excavation does not exceed 1000mm and the distance from the finished face of the structure to the excavated face is less than 250mm for formwork or 600mm for brick linings and 2. The depth of the excavation exceeds 1000mm and the distance from the finished face of the structure to the excavated face is less than 600mm <p><u>Filling and layer work materials</u></p> <p>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</p> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series</p>	
Carried Forward	R
<p>Landscaping and Paving - 85 Units</p> <p>Bill No.1 - Landscaping and Paving</p>	

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Brought Forward			R
<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>Precast concrete block road surfacing</u>			
Paving shall be laid in accordance with SABS 1200 MJ, SANS 1058 and the Concrete Masonry Association's specifications			
<u>SITE CLEARANCE (CPAP WORK GROUP 104)</u>			
<u>Site clearance</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m2	7,280
<u>FILLING, ETC (CPAP WORK GROUP 104)</u>			
<u>G5 Earth filling from commercial sources supplied by the Contractor in accordance with SABS 1200 DM, compacted to 95% Mod AASHTO density</u>			
2	Base/Sub-Base layers	m3	1,080
<u>G7 Earth filling from commercial sources supplied by the Contractor in accordance with SABS 1200 DM, compacted to 98% Mod AASHTO density</u>			
3	Over site to make up levels	m3	1,080
<u>Compaction of surfaces</u>			
4	Compaction of natural or excavated ground surface under parking areas etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density	m2	7,280
<u>Prescribed density tests on filling:</u>			
5	"Modified AASHTO Density" test	No	35
Carried Forward			R
Landscaping and Paving - 85 Units Bill No.1 - Landscaping and Paving			

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Brought Forward			R
<u>PAVING ETC (CPAP WORK GROUP 118)</u>			
<u>Allow the prime cost amount of R10,000 per thousand paving bricks (ten thousand rand) for the supply and delivery to site of paving of 50mm clay paving bricks laid on 50mm thick river sand bed</u>			
6	Clay paving laid with open joints with sand and cement mixture swept into joints, hosed down and pointed with slightly keyed joints including preparation of ground or filling in stretcher bond	m2	7,200
<u>PRECAST CONCRETE (CPAP WORK GROUP 112)</u>			
<u>Precast concrete kerbs finished smooth on exposed surfaces, bedded on a 50mm thick x 175mm wide layer of unreinforced concrete with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint and jointed in 3.1 cement mortar, including excavation, backfilling, etc</u>			
7	75 x 150mm High kerbs (E1/SANS 927 fig 11)	m	8,000
Carried Forward to Summary of Section No. 6			R
Landscaping and Paving - 85 Units			
Bill No.1 - Landscaping and Paving			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 6 - LANDSCAPING AND PAVING - 85 UNITS</u></p> <p><u>BILL NO.2 - PLUMBING AND DRAINAGE</u></p> <p><u>(CPAP WORK GROUP 146,148 & 171 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Wire gratings</u></p> <p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings</p>			
	<p style="text-align: right;">Carried Forward</p> <p>Landscaping and Paving - 85 Units Bill No.2 - Plumbing and Drainage</p>		R	

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Brought Forward		R
<p><u>Stormwater channels</u></p> <p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc, and disposal of surplus material on site</p> <p><u>Exposed concrete surfaces</u></p> <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> <p><u>Sealing of edges</u></p> <p>Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone</p> <p><u>Reducing fittings</u></p> <p>Where fittings have reducing ends or branches they are described as "reducing" and 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</p> <p><u>uPVC pipes and fittings</u></p> <p>Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings</p> <p>Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings</p> <p><u>uPVC pressure pipes and fittings</u></p> <p>Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings</p> <p>Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints</p>		
Carried Forward		R
<p>Landscaping and Paving - 85 Units</p> <p>Bill No.2 - Plumbing and Drainage</p>		

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Brought Forward	R
<p><u>High density polyethylene (HDPE) pipes and fittings</u></p> <p>Pipes shall be type IV and of the class specified with "Plasson" or "Alprene" compression fittings</p> <p><u>"Polycop" polypropylene pipes</u></p> <p>Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings</p> <p>Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions</p> <p><u>Copper pipes</u></p> <p>Pipes shall be hard drawn and half-hard "Maksal" pipes of the class described. 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. Capillary solder fittings shall comply with ISO 2016</p> <p>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</p> <p><u>Fixing of pipes</u></p> <p>Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc, casting in, building in or suspending not exceeding 1m below suspension level</p>	
Carried Forward	R
<p>Landscaping and Paving - 85 Units</p> <p>Bill No.2 - Plumbing and Drainage</p>	

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Brought Forward	R
<p><u>Stainless steel basins, sinks, wash troughs, urinals, etc</u></p> <p>Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)</p> <p>Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)</p> <p>Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)</p> <p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable</p> <p><u>Paper wrapping to pipes</u></p> <p>Pipes chased into brickwork must be wrapped with two layers of stout brown paper tied with wire. Rates are to include for wrapping around joints and fittings</p> <p><u>Laying, backfilling, bedding, etc of pipes</u></p> <p>Pipes shall be laid and bedded in accordance with manufacturers' instructions and trenches shall be carefully backfilled</p> <p><u>Filling and bedding material</u></p> <p>Selected Fill Material: Selected material shall be material that has a P.I not greater than 6, is free from vegetation and from lumps and stones of diameter > 30mm. This material shall be used for the selected fill blanket</p> <p>Selected Granular Material: Selected granular material shall be of a granular, non-cohesive nature that is singularly graded between .6mm and 19mm, free draining, has a compact ability factor not exceeding .4 or such similar value as is laid down in project specification. For PVC and uPVC the factor is not to exceed the following; 1) 0.1 - Material suitable for all ground conditions 2) 0.3 - Material suitable provided extra care is taken during compaction operation</p>	
Carried Forward	R
<p>Landscaping and Paving - 85 Units Bill No.2 - Plumbing and Drainage</p>	

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Brought Forward				R
<p>Joints:</p> <p>To ensure that each pipe will be fully supported throughout the length of its barrel on the bedding cradle, joint pockets/ holes shall be formed in the bedding cradle for pipe sockets</p> <p>All work below ground shall be carried out in accordance with SANS 1200DB, SANS 1200LB, SANS 1200LD and SANS 1200LE</p> <p><u>General</u></p> <p>Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc and to steel pipes (adaptors for connections to copper pipes, etc are given separately)</p> <p>Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured)</p> <p><u>EARTHWORKS (STORMWATER, SUBSOIL DRAINAGE, STORMWATER DRAINAGE, SLEEVES FOR ELECTRICAL AND TELEPHONE CABLES ETC, SOIL DRAINAGE AND WATER SUPPLIES) (CPAP WORK GROUP 146)</u></p> <p><u>Excavation in earth</u></p>				
1	Excavation in earth not exceeding 1m deep for pipe or cable trenches or chambers including risk of collapse of excavations	m3	1,600	
2	Excavation in earth exceeding 1m but not exceeding 2m deep for pipe or cable trenches or chambers including risk of collapse of excavations	m3	2,400	
3	Extra over excavation in earth for pipe and cable trenches or chambers for excavation in soft rock	m3	400	
4	Extra over excavation in earth for pipe and cable trenches or chambers for excavation in hard rock	m3	200	
Carried Forward				R
<p>Landscaping and Paving - 85 Units</p> <p>Bill No.2 - Plumbing and Drainage</p>				

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Brought Forward			R
5	Extra over excavation for pipe and cable trenches or chambers for carting away surplus material to a dumping site located by the contractor (This rate 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, and spoiled at a site located by the contractor not exceeding 10km in one direction from the site. Rate should not allow for the spoiling costs paid at the dump site and this will be measured as an separate item in each work package)	m3	1,788
6	Extra over carting away of surplus material further than 10km in one direction from the site	m3	1,192
7	Backfilling to pipe or cable trenches or chambers	m3	800
8	Backfilling to pipe or cable trenches compacted or chambers to 95% Mod AASHTO density	m3	1,200
9	Selected granular filling in bedding under and filling around pipes	m3	343
10	Sand filling in bedding under and filling around pipes	m3	637
<u>CONCRETE (STORMWATER, SUBSOIL DRAINAGE, STORMWATER DRAINAGE, SLEEVES FOR ELECTRICAL AND TELEPHONE CABLES ETC, SOIL DRAINAGE AND WATER SUPPLIES) (CPAP WORK GROUP 146)</u>			
11	15MPa/19mm Concrete in encasing to not exceeding 110mm diameter horizontal pipe of a minimum thickness of 150mm around pipe, including all necessary casing	m	800
12	15MPa/19mm Concrete in encasing to not exceeding 110mm diameter horizontal bend or junction of a minimum thickness of 150mm around fitting, including all necessary casing	No	220
13	15MPa/19mm Concrete in thrust block (approximately 0,06 cubic metres) at bends, etc., including casing	No	132
Carried Forward			R
Landscaping and Paving - 85 Units Bill No.2 - Plumbing and Drainage			

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	Brought Forward			R	
	<u>SLEEVES FOR ELECTRICAL AND TELEPHONE CABLES ETC (CPAP WORK GROUP 171)</u>				
	<u>Class 6 PVC-U pipes</u>				
14	50mm Pipes laid in trenches (trenches elsewhere)	m	4,000		
15	110mm, ditto	m	4,000		
	<u>Extra over Class 6 PVC-U pipes for fittings</u>				
16	50mm Long radius bend	No	88		
17	100mm Ditto	No	110		
	<u>Draw wires</u>				
18	1,6mm Galvanised steel draw wires in pipes	m	8,000		
	<u>Precast concrete circular inspection chambers including precast concrete cover slabs (cast iron covers and frames elsewhere) and channels in benching:</u>				
19	1000mm Diameter inspection chamber not exceeding 1m deep internally	No	40		
	<u>Gratings, covers, etc:</u>				
20	Type 2A 635mm diameter cast iron manhole cover and frame	No	40		
21	Lifting-key for manhole cover (handed to Employer)	No	40		
	<u>Provisional Sum for Borehole</u>				
22	Provide the sum of R350,000 (Three Hundred and Fifty Thousand Rands) for 1 No. borehole servicing all 85 units.		PS		350,000.00
23	Contractors Markup			%	
	Carried Forward to Summary of Section No. 6				
	Landscaping and Paving - 85 Units				
	Bill No.2 - Plumbing and Drainage				

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 7</u>			
	<u>BILL NO. 1</u>			
	<u>DEMOLITIONS</u>			
	<u>(CPAP WORK GROUP 104 UNLESS OTHERWISE STATED)</u>			
	<u>Preambles</u>			
	<p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
	<u>View site</u>			
	<p>Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained</p>			
	<u>Explosives</u>			
	<p>No explosives whatsoever may be used for alteration purposes unless otherwise stated</p>			
	Carried Forward		R	
	Demolitions - 28 Units Bill No.1 - Demolitions			

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Brought Forward			R
<u>General</u>			
Water supply pipes and other piping in ground that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings to the satisfaction of the principal agent			
Unless otherwise described all materials are to become the property of the contractor and are to be removed from the site			
<u>REMOVAL OF EXISTING WORK</u>			
<u>Demolishing and removing</u>			
1	Demolition of staff quarters, comprising concrete surface bed, external walls, internal walls, roof covering, etc including the removal of rubble complete	m2	2,253
2	Excavation in earth not exceeding 2m deep to demolish and remove 110mm clay sewer pipe	m	560
3	600mm diameter manholes not exceeding 1.5m deep	m3	25
Carried to Final Summary			R
Demolitions - 28 Units			
Bill No.1 - Demolitions			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u></p> <p><u>BILL NO.1 - EARTHWORKS</u></p> <p><u>(CPAP WORK GROUP 104 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Nature of ground</u></p> <p>The nature of the ground is unknown and the contractor is to make his own assessment and due allowance for same</p>			
	Carried Forward		R	
	<p>Building Works - 28 Units</p> <p>Bill No.1 - Earthworks</p>			

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	Brought Forward			R
	<p><u>Subterranean water</u></p> <p>The nature of the ground is unknown and the contractor is to make his own assessment and due allowance for same</p> <p><u>Carting away of excavated material</u></p> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p> <p><u>Filling and layer work materials</u></p> <p>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</p> <p><u>Testing</u></p> <p>Prices for filling are to include for all necessary density and other tests</p> <p><u>Formwork</u></p> <p>Formwork to sides of footings, 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</p> <p><u>SITE CLEARANCE</u></p> <p><u>Site clearance</u></p>			
1	<p>Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth</p>	m2	510	
	Carried Forward			R
	<p>Building Works - 28 Units</p> <p>Bill No.1 - Earthworks</p>			

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Brought Forward			R
<u>REMOVAL OF TREES ETC</u>			
<u>Taking out and removing, grubbing up roots and filling in holes</u>			
2	Tree stump not exceeding 1m high, exceeding 200mm and not exceeding 500mm girth	No	2
3	Tree stump not exceeding 1m high, exceeding 1500mm and not exceeding 2000mm girth	No	2
<u>Cutting down and removing, grubbing up roots, filling in holes and compacting to 95%PERC Mod AASHTO density</u>			
4	Hedge not exceeding 1500mm high	m	12
5	Hedge exceeding 1500mm and not exceeding 3000mm high	m	6
<u>EXCAVATION, FILLING, ETC OTHER THAN BULK</u>			
<u>EXCAVATIONS ETC</u>			
<u>Excavation in earth not exceeding 2m deep</u>			
6	Trenches	m3	130
7	Thickening under surface beds etc	m3	6
<u>Extra over trench and hole excavations in earth for excavation in</u>			
8	Soft rock	m3	13
9	Hard rock	m3	7
<u>Extra over trench and hole excavations in earth for breaking up and removing</u>			
10	Brickwork	m3	13
11	Unreinforced concrete	m3	13
12	Reinforced concrete	m3	7
Carried Forward			R
Building Works - 28 Units Bill No.1 - Earthworks			

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Brought Forward			R
<u>Back excavation of vertical sides of excavations in earth for working space including backfilling compacted to 93%PERC Mod AASHTO density</u>			
13	Not exceeding 500mm deep for placing and removing formwork to walls etc, 250mm away from excavated face	m2	120
14	Extra over for excavation in soft rock	m2	12
15	Extra over for excavation in hard rock	m2	6
<u>Extra over all excavations for carting away</u>			
16	Surplus material from bulk excavations and/or stock piles on site to a dumping site located by the contractor (This rate 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, and spoiled at a site located by the contractor not exceeding 10km in one direction from the site.	m3	56
17	Extra over carting away of surplus material further than 10km in one direction from the site	m3	24
<u>Risk of collapse of excavations</u>			
18	Sides of trench and hole excavations not exceeding 1,5m deep	m2	135
19	Sides of trench and hole excavations exceeding 1,5m deep	m2	203
<u>Keeping excavations free of water</u>			
20	Keeping excavations free of all water other than subterranean water		Item
<u>FILLING ETC</u>			
<u>Selected earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density</u>			
21	Under floors, steps, pavings, etc	m3	11
Carried Forward			R
Building Works - 28 Units Bill No.1 - Earthworks			

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	Brought Forward			R
22	Backfilling to trenches, holes, etc	m3	55	
	<u>Filling of coarse river sand supplied by the contractor, consolidated</u>			
23	Under floors etc	m3	28	
24	Compaction of natural or excavated ground surface under floors etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density	m2	263	
	<u>WEED KILLERS, INSECTICIDES, ETC</u>			
	<u>Soil insecticide in accordance with SANS 5859</u>			
25	Under floors etc, including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	263	
26	To bottoms and sides of trenches etc	m2	442	
	<u>TESTS</u>			
	<u>Prescribed tests to determine degree of compaction or other properties of ground or filling (the following test should include travelling cost from laboratory to site within 10km in one direction to the site)</u>			
27	"Modified AASHTO Density" test	No	4	
28	In-situ dry density test in accordance with method A10(b) of TMH1	No	4	
Carried Forward to Summary of Section No. 8				R
Building Works - 28 Units				
Bill No.1 - Earthworks				

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u></p> <p><u>BILL NO.2 - CONCRETE, FORMWORK AND REINFORCEMENT</u></p> <p><u>(CPAP WORK GROUP 110, 111 and 114 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
	Carried Forward		R	
	<p>Building Works - 28 Units</p> <p>Bill No.2 - Concrete, Formwork and Reinforcement</p>			

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Brought Forward	R
<p><u>Cost of tests</u></p> <p>The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests for approval. The testing shall be undertaken by an approved independent firm or institution nominated by the contractor (test cubes are measured separately)</p> <p><u>No-Fines concrete</u></p> <p>No-Fines concrete shall consist of 6 part aggregate to one part cement (1:6)</p> <p><u>Striking off and curing</u></p> <p>Concrete prices are to include for striking off and curing.</p> <p><u>Formwork</u></p> <p>Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use</p> <p>The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself</p> <p>Formwork to soffits of solid slabs etc shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described</p> <p>Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described</p>	
Carried Forward	R
<p>Building Works - 28 Units</p> <p>Bill No.2 - Concrete, Formwork and Reinforcement</p>	

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Brought Forward			R
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 AGAINST EXCAVATED SURFACES (CPAP WORK GROUP 110)</u>			
<u>15MPa/19mm concrete</u>			
1	Blinding	m3	5
<u>20MPa/19mm concrete</u>			
2	Strip footings	m3	2
3	Surface beds on waterproofing	m3	74
4	Thickening to surface beds	m3	3
<u>UNREINFORCED CONCRETE</u>			
<u>15MPa/19mm concrete</u>			
5	Filling to cavity of hollow brick wall	m3	8
<u>REINFORCED CONCRETE</u>			
<u>25MPa/19mm concrete</u>			
6	Surface beds on waterproofing	m3	19
7	Strip footings	m3	24
8	Thickening to surface beds	m3	3
<u>30MPa/19mm concrete</u>			
9	Superstructure slabs	m3	54
10	Superstructure Staircases	m3	2
Carried Forward			R
Building Works - 28 Units Bill No.2 - Concrete, Formwork and Reinforcement			

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	Brought Forward		R
11	Beams	m3	2
	<u>TEST CUBES</u>		
12	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	12
	<u>CONCRETE SUNDRIES</u>		
	<u>Finishing top surfaces of concrete smooth with a wood float</u>		
13	Surface beds, slabs, etc	m2	263
	<u>ROUGH FORMWORK (DEGREE OF ACCURACY III) (CPAP WORK GROUP 111)</u>		
	<u>Rough formwork to sides</u>		
14	Strip footings	m2	301
15	Isolated or wall beams	m2	15
16	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	48
	<u>Rough formwork to soffits</u>		
17	Slabs propped up exceeding 1,5m and not exceeding 3,5m high	m2	216
18	Stairs with sloping soffits	m2	6
19	Isolated wall beams over openings propped up exceeding 1,5m and not exceeding 3.5m high	m2	5
	<u>MOVEMENT JOINTS ETC</u>		
	<u>Expansion joints with 10mm closed cell expanded polyethylene between vertical concrete and brick surfaces</u>		
20	Not exceeding 300mm high to edges of surface beds	m	120
	Carried Forward		R
	Building Works - 28 Units Bill No.2 - Concrete, Formwork and Reinforcement		

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Brought Forward			R
	<u>Two layers of 0,6mm galvanised steel sheets with grease in between slip joints between horizontal concrete and brick surfaces including cement mortar bed</u>		
21	Not exceeding 300mm wide	m	16
	<u>Saw-cut joints</u>		
22	4 x 50mm Saw-cut joints in top of concrete	m	120
	<u>REINFORCEMENT (CPAP WORK GROUP 114)</u>		
	<u>Mild & High tensile steel reinforcement to structural concrete work</u>		
23	Steel bars of varying diameter	t	7.28
	<u>Fabric reinforcement</u>		
24	Type 193 fabric reinforcement in concrete surface beds etc	m2	85
25	Type 245 fabric reinforcement in concrete surface beds etc	m2	104
Carried Forward to Summary of Section No. 8			R
Building Works - 28 Units			
Bill No.2 - Concrete, Formwork and Reinforcement			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u></p> <p><u>BILL NO.3 - MASONRY</u></p> <p><u>(CPAP WORK GROUP 116 & 118 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</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>			
	Carried Forward		R	
	Building Works - 28 Units Bill No.3 - Masonry			

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Brought Forward			R
<u>Hollow walls</u>			
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			
<u>Bagged and sealed walls</u>			
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 bitumen emulsion waterproofing coating			
<u>BRICKWORK</u>			
<u>FOUNDATIONS</u>			
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar</u>			
1	One brick walls	m2	35
2	280mm Hollow walls of two half brick skins, including wire ties	m2	87
<u>SUPERSTRUCTURE</u>			
<u>Brickwork of NFP bricks (14 MPa nominal compressive strength) in class II mortar</u>			
3	Half brick walls.	m2	149
4	Half brick balustrade walls	m2	9
5	Half brick walls in beamfilling	m2	14
6	One brick walls	m2	223
7	280mm Hollow walls of two half brick skins, including wire ties	m2	635
<u>BRICKWORK SUNDRIES</u>			
8	Splayed mortar fillets one course high in 60mm cavities	m	160
Carried Forward			R
Building Works - 28 Units Bill No.3 - Masonry			

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Brought Forward			R
9	Closing 60mm cavities of hollow walls vertically with brickwork half brick wide	m	129
10	Closing 60mm cavity of hollow wall horizontally with one course of brickwork	m	45
11	150mm Wide sill set sloping and slightly projecting	m	25
<u>Joint forming material in movement joints</u>			
12	10mm Bitumen impregnated fibre board not exceeding 300mm wide built in vertically through brick walls	m	31
<u>2,5mm Galvanised brick reinforcement</u>			
13	75mm Wide reinforcement built in horizontally	m	1,581
14	150mm Wide reinforcement built in horizontally	m	221
<u>Prestressed fabricated concrete lintels including necessary temporary supports</u>			
15	110 x 75mm Lintels in lengths not exceeding 3m	m	149
<u>Galvanised hoop iron cramps, ties, etc</u>			
16	32 x 1,6mm Roof tie 1,5m long with one end built into brickwork and other end fixed to timber	No	68
<u>Air bricks etc</u>			
17	229 x 152mm Clay vermin proof air brick	No	28
<u>FACE BRICKWORK</u>			
<u>Allow the prime cost amount amount of R 9,000.00 (Nine thousand Rand) per thousand for 'breeze block bricks' delivered to site pointed with square recessed horizontal and vertical joints</u>			
18	Half brick walls pointed on both sides	m2	34
Carried Forward			R
Building Works - 28 Units Bill No.3 - Masonry			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u></p> <p><u>BILL NO.4 - WATERPROOFING</u></p> <p><u>(CPAP WORK GROUP 120 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Waterproofing</u></p> <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>			
	Carried Forward		R	
	<p>Building Works - 28 Units</p> <p>Bill No.4 - Waterproofing</p>			

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Brought Forward			R
<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	m2	29
2	In walls vertically at reveals	m2	36
<u>One layer 375 micron orange polyethylene waterproof sheeting (SANS 952-1985 type A) sealed at laps with PVC self-adhesive tape</u>			
3	Under surface beds	m2	189
<u>Two coats "ABE dura.proof hydrokote" or similar approved flexible hydraulic micro-mortar waterproofing and protection membrane, applied in accordance with the manufacturers instruction</u>			
4	On shower walls	m2	22
5	On shower floors	m2	3
Carried Forward to Summary of Section No. 8			R
Building Works - 28 Units			
Bill No.4 - Waterproofing			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u></p> <p><u>BILL NO.5 - ROOF COVERINGS, ETC</u></p> <p><u>(CPAP WORK GROUP 122, 124 &125 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
	Carried Forward		R	
	Building Works - 28 Units Bill No.5 - Roof Coverings, etc			

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Brought Forward			R
<u>Guaranteee</u>			
The contractor will be required to provide an Engineer and a written guarantee, stating that :			
1. The roof sheeting is of the specified thickness.			
2. The client is indemnified against any defects, including colour deterioration for a minimum period of 5 years.			
3. All roof coverings and side cladding are to be installed to comply with SANS Code of Practice 0237 where applicable. All roof sheeting shall be laid under a 5 year guarantee for site workmanship and water tightness.			
<u>PROFILED METAL SHEETING AND ACCESSORIES</u> <u>(CPAP WORK GROUP 124)</u>			
<u>Global Roofing Solutions 700mm cover Klip-Lok 700™ profile roll-formed in continuous lengths from ZINCALUME® AZ150 coated steel G550 0.53mm (Heavy Industrial) with a Clean COLORBOND finish to one side and a standard backing coat, Shadow Grey to other, fixed to timber purlin using KL700 plus clips fixed with , all following the manufacturer's specifications by a GRS approved contractor. A written and approved five year guarantee of water-tightness shall be issued after approval of roofs by the manufacturer.</u>			
1	Roof covering with pitches not exceeding 25 degrees	m2	250
<u>0,53mm AZ150 Zincalume steel sheet accessories to preceding roof covering and side cladding with clean Colorbond finish in approved standard colour on one side and a standard backing coat to the reverse side</u>			
2	Ridge cappings 550mm girth bent and notched to suit roof profile including serrated closers and poly-closers	m	24
3	Gable Trim (Barge Flash) 580mm girth 3 times bent.	m	21
Carried Forward			R
Building Works - 28 Units Bill No.5 - Roof Coverings, etc			

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Brought Forward		R
<u>ROOF AND WALL INSULATION (CPAP WORK GROUP 122)</u> <u>"Sisalation Fireshield NC 502 D/S" or similar approved double sided aluminium foil radiant barrier</u>		
4	Insulation sheeting fixed to underside of rafters (at approximately 1200mm centres) with 150mm stapled laps including galvanised PVC coated steel straining wires at not exceeding 400mm centres and double-sided tape at edges where required	250
	m2	
Carried Forward to Summary of Section No. 8 Building Works - 28 Units Bill No.5 - Roof Coverings, etc		R

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u></p> <p><u>BILL NO.6 - CARPENTRY AND JOINERY</u></p> <p><u>(CPAP WORK GROUP 126 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Fixing</u></p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete</p>			
	Carried Forward		R	
	<p>Building Works - 28 Units</p> <p>Bill No.6 - Carpentry and Joinery</p>			

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Brought Forward					R
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given elsewhere</p> <p>All sections of timber to be built into brickwork of concrete to be wrapped in Gunplast and the cost is deemed to be included in the relevant item.</p> <p>Tenderers should include silicone sealant between skirting and finished surfaces of walls and floors in their price</p> <p><u>Joinery</u></p> <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> <p>All exposed timber to be treated with preservative to combat fungus as prescribed by the Forestry Act 1968 (Act 72 of 1968).</p> <p><u>PLATE NAILED TIMBER ROOF TRUSS CONSTRUCTION ETC.</u></p> <p><u>DESIGN, SUPPLY AND INSTALL</u></p>					
1	<p>Roof construction for double pitched roof to Terrace Block building with gable ends on both sides approximate size 23,550.00 x 10,880.00m on plan and approximately 7,400.00m above NGL high overall including wall plates, trusses at approximately 1 025mm centres and 50 x 76mm purlins/battens at approximately 1,200m centres for roof covering, complete.</p>	No	1		
<u>EAVES, VERGES, ETC</u>					
<u>Wrought meranti</u>					
2	16mm Quadrant beads	m	47		
Carried Forward					R
<p>Building Works - 28 Units Bill No.6 - Carpentry and Joinery</p>					

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Brought Forward			R
<u>Medium density plain fibre-cement flat sheets</u>			
3	6mm Eaves or verge soffit covering including 38 x 38mm sawn softwood branders along edges, along centre and at 450mm centres across sheets	m2	24
<u>Medium density plain fibre-cement fascias and barge boards</u>			
4	12 x 225mm Fascias and barge boards, including galvanised steel H-profile jointing strips	m	47
<u>FLOORS AND SKIRTINGS</u>			
<u>SKIRTINGS</u>			
<u>Wrought meranti</u>			
5	20 x 70mm Skirtings, plugged	m	140
6	21 x 140mm Decorative moulded skirtings plugged	m	171
<u>TIMBER DOORS, WINDOWS, ETC</u>			
<u>DOORS ETC</u>			
<u>Semi-solid flush doors with 3,2mm plain hardboard covering on both sides, hung to steel or timber frames</u>			
7	40mm Door 813 x 2032mm high	No	16
8	Extra over for 300 x 300mm framed opening for metal louvre unit (louvre unit elsewhere)	No	12
<u>Hollow core flush doors with commercial veneer, hung to slide</u>			
9	40mm Door 813 x 2032mm high	No	4
Carried Forward			R
Building Works - 28 Units Bill No.6 - Carpentry and Joinery			

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Item No	Quantity	Rate	Amount
<u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u>			
<u>BILL NO.7 - CEILINGS</u>			
<u>(CPAP WORK GROUP 129 UNLESS OTHERWISE STATED)</u>			
NOTE			
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<u>Preambles</u>			
<p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p>			
<p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p>			
<p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
<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>			
Carried Forward			R
Building Works - 28 Units Bill No.7 - Ceilings			

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Brought Forward					R
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given elsewhere</p> <p><u>Ceilings</u></p> <p>Unless otherwise described ceilings shall be deemed to be horizontal</p> <p><u>Bulkheads</u></p> <p>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</p> <p>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</p> <p>Unless otherwise described bulkheads shall be deemed to be horizontal along the length</p> <p><u>Steel components</u></p> <p>All steel components for ceilings, partitions, etc are to be galvanised in accordance with SANS 121</p> <p><u>Openings</u></p> <p>Prices for openings for light fittings, ventilation grilles, air conditioning diffusers, etc are to include for any necessary additional support, trimming around, etc</p> <p><u>CEILING TIMBERS, BEADS, INSULATION, ETC</u></p> <p><u>"Knauf" insulation</u></p>					
1	135mm Thick Glasswool thermal insulation laid on top of brandering between roof timbers, etc.	m2	177		
Carried Forward					R
<p>Building Works - 28 Units</p> <p>Bill No.7 - Ceilings</p>					

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Brought Forward				R
<u>NAILED UP CEILINGS</u>				
<u>SUPPLEMENTARY PREAMBLES</u>				
<u>Openings</u>				
<u>Prices for openings for light fittings, ventilation grilles, air conditioning diffusers, etc are to include for any necessary additional support, trimming around, etc</u>				
<u>6,4mm Gypsum plasterboard with galvanised steel jointing strips or 20mm half round wrot Meranti cover strips over joints</u>				
2	Ceilings nailed to 38 x 50mm sawn softwood brandering (brandering elsewhere measured) at 300mm centres generally in both direction at joints and edges of boards	m2	177	
3	Extra over ceiling for 610 x 610mm trap door of 38 x 50mm wrought softwood rebated framing with one cross brander, covered with ceiling board and fitted flush in opening, including necessary trimmers around	No	2	
4	Opening for 100mm diameter downlighter	No	12	
5	Rectangular bulkheads against wall 400mm wide x 200mm high, suspended not exceeding 1m below timber rafters at approximately 1200mm centres	m	20	
<u>Polystyrene cornices</u>				
6	100 x 100mm Coved cornice.	m	210	
Carried Forward				R
Building Works - 28 Units Bill No.7 - Ceilings				

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<p style="text-align: right;">Brought Forward</p> <p><u>SUSPENDED CEILINGS</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Proprietary suspended ceilings</u></p> <p><u>Hangers, suspension grids, "lay-in" panels, etc are to be in accordance with the manufacturers' recommendations</u></p> <p><u>Electrical light fittings, diffusers, panels etc are generally "lay-in" units of the same dimensions as the suspension grid described and allowance must be made in the rates 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).</u></p> <p><u>Flush plastered gypsum plasterboard suspended ceilings</u></p> <p><u>Ceilings shall comprise 9,5mm gypsum plasterboard boards screwed to and including screw-up suspension grid consisting of main tees at 1 200mm centres and galvanised steel capped cross tees at 400mm centres and with tape fixed over joints and the whole finished with gypsum plaster trowelled to a smooth polished surface.</u></p> <p><u>The grid shall be suspended by means of galvanised steel L-section hangers at suitable centres, securely shot-pinned or screwed to concrete, steel or wood.</u></p> <p><u>Flush plastered gypsum plasterboard suspended bulkheads</u></p>	<p style="text-align: right;">R</p>
<p style="text-align: right;">Carried Forward</p> <p>Building Works - 28 Units Bill No.7 - Ceilings</p>	<p style="text-align: right;">R</p>

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Brought Forward			R
<p><u>Bulkheads shall comprise galvanised steel studding of 63,5mm top and bottom tracks with vertical studs at maximum 400mm centres, pop-riveted to the top and bottom tracks with similar additional vertical studs as necessary at abutments, ends, etc and covered as described with plasterboard screwed to studding with drywall screws at maximum 300mm centres. Boards shall be butt jointed and finished with tape and jointing compound and the whole finished with gypsum plaster trowelled to a smooth polished surface to the thickness recommended by the manufacturer.</u></p> <p><u>Descriptions shall be deemed to include any additional studs at ends and intersections, corner beads, cornices at junctions with ceilings, jointing compound, tape, etc</u></p> <p><u>9.5mm Gypsum plasterboard on "Donn QRC T37K" or similar approved suspension grid including hangers etc, with tape fixed over joints and the whole finished with gypsum plaster trowelled to a smooth polished surface</u></p>			
7	Ceilings suspended not exceeding 1m below concrete soffits	m2	170
8	Opening for 100mm diameter downlighter	No	12
9	Rectangular bulkheads against wall 1000mm wide x 300mm high, suspended not exceeding 1m below concrete soffits	m	25
<u>Cornices, perimeter trims, etc to suspended ceilings</u>			
10	Shadowline wall angle trim, plugged	m	210
<p style="text-align: right;">Carried Forward to Summary of Section No. 8</p> <p>Building Works - 28 Units Bill No.7 - Ceilings</p>			R

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u></p> <p><u>BILL NO.8 - FLOOR COVERINGS, ETC</u></p> <p><u>(CPAP WORK GROUP 130 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Fixing</u></p> <p>Floor coverings, wall linings, etc shall, where applicable, be fixed with adhesive as recommended by the manufacturers of the flooring, linings, etc</p>			
	Carried Forward		R	
	<p>Building Works - 28 Units</p> <p>Bill No.8 - Floor Coverings, etc</p>			

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Brought Forward	R
<p><u>Surface preparation, priming, curing, cleaning etc</u></p> <p>Descriptions of the items below are deemed to include all necessary preparation, priming, mixing, curing, cleaning etc as prescribed by the manufacturers of the various products</p> <p><u>Prime Cost (PC) Sums</u></p> <p>Prime Cost (PC) Sums means an amount of money provided in the bills of quantities for material and goods to be obtained from a supplier nominated by the architect and to be fixed by the contractor</p> <p>The prime cost amount shall be omitted from the contract sum and the amounts actually paid by the contractor in respect of the purchase of the nett quantity of such items including delivery to site shall be added to the contract sum</p> <p>The contractor has to allow for labour, profit and waste in his rate over and above the PC amount</p> <p><u>Installation by an Approved Applicator</u></p> <p>The installation of the floor coverings is to be executed by an approved applicator (subcontractor)</p>	
Carried Forward	R
<p>Building Works - 28 Units</p> <p>Bill No.8 - Floor Coverings, etc</p>	

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Brought Forward	R
<p><u>Installation and Preparation of Sub-floor</u></p> <p>Vinyl floor coverings shall be installed in accordance with manufacturer's recommendations. Sub-floors must be smooth, hard, clean, level and dry before laying commences.</p> <p>Where existing vinyl floor coverings have been uplifted, then all bitumen adhesive must be removed by means of a scraper or any other suitable mechanical device.</p> <p>Dirt and dust must be removed by sweeping or, preferably by vacuum.</p> <p>All grease, oil patches and any oil-based paint must be removed with suitable paint strippers or degreasing compounds. Once grease has been removed then the sub-floor must be washed to remove any stripper or residue and then allowed to dry thoroughly.</p> <p>All sub floors must be tested for moisture content with a hygrometer or Trammex prior to installation.</p> <p>Vinyl floor coverings must be allowed to relax for 24 hours in a uniform room temperature between 18 degrees C and 27 degrees C prior to installation.</p> <p>Vinyl floor coverings are to be fixed with adhesive as recommended by the manufacturer and in accordance with the manufacturers instructions.</p> <p>Vinyl floor coverings should be hot seam welded using welding rod as recommended by the manufacturer. It is essential that during the course of the installation the material be rolled in both directions with an articulated 68kg three sectional metal floor roller.</p>	
Carried Forward	R
<p>Building Works - 28 Units</p> <p>Bill No.8 - Floor Coverings, etc</p>	

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	Brought Forward			R
<u>FLOOR COVERINGS</u>				
<u>228 x 1219 x 3mm "FloorWorX" planks including underlay (Allow prime cost of R375,00/m² for the supply and deliver to site) laid to screeded floors (screeds elsewhere measured) including fitting, cutting and circular cutting all in accordance with the manufacturers specification.</u>				
1	On floors	m2	67	
<u>8mm Engineered laminate floor planks including rubber underlay (Allow prime cost of R300,00/m² for the supply and deliver to site) laid to screeded floors (screeds elsewhere measured) including fitting, cutting all in accordance with the manufacturers specification.</u>				
2	On floors	m2	144	
Carried Forward to Summary of Section No. 8				R
Building Works - 28 Units				
Bill No.8 - Floor Coverings, etc				

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u></p> <p><u>BILL NO.9 - IRONMONGERY</u></p> <p><u>(CPAP WORK GROUP 132 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
	Carried Forward		R	
	Building Works - 28 Units Bill No.9 - Ironmongery			

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Brought Forward				R
<u>Proprietary items</u>				
Where applicable the manufacturers' names or product catalogue titles are given in sub-headings preceding the items				
Prices are to be based on the specific products/articles specified. If tenderers wish to offer alternative products/articles for certain items, these items are to be clearly marked and the alternative specification given with supporting brochures etc clarifying the features of the products/articles offered				
On request returnable samples are to be provided to the Project Manager for consideration				
<u>Finishes to ironmongery</u>				
Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list:				
BS Satin bronze lacquered				
CH Chromium plated				
SC Satin chromium plated				
SE Silver enamelled				
Sn Satin Nichol				
GE Grey enamelled				
AN Anodised natural				
AA Anodised Aluminium				
AS Anodised silver				
AB Anodised bronze				
AG Anodised gold				
ABL Anodised black				
PB Polished brass				
PL Polished and lacquered				
PT Epoxy coated				
SD Sanded				
S Sil				
<u>HINGES, BOLTS, ETC</u>				
<u>"Yale" or similar approved</u>				
1	100 x 76mm Brass Stainless Steel Butt Hinge (Product Code 1075472)	Pairs	24.0	
Carried Forward				R
Building Works - 28 Units Bill No.9 - Ironmongery				

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	Brought Forward			R
<u>LOCKS</u>				
<u>"Union" or similar approved</u>				
2	CP Two lever upright lock CODE 22311-7615.	No	16	
3	SS 8mm "22314" Bathroom Lock	No	4	
<u>HANDLES</u>				
<u>"Union" or similar approved</u>				
4	Waterbok Lever Handle on Rose AL6W00-06AS	Pairs	20.0	
<u>DOOR CLOSERS</u>				
<u>"Union" or similar approved</u>				
5	"744P DC744 EN1-6 PA DA" Door closer	No	4	
<u>SLIDING GEAR</u>				
<u>"Hillaldam" or similar approved</u>				
6	Domestic Sliding Door Kit	No	4	
<u>SUNDRIES</u>				
<u>Coir door mats laid loose in mat surround</u>				
7	1000 x 1500 x 38mm Door mat	No	4	
<u>"Union" or similar approved</u>				
8	AL8722AS Hat & Coat Hook with rubber buffer.	No	8	
<u>BATHROOM FITTINGS</u>				
<u>"Solid" or similar approved</u>				
9	19mm Diameter 900mm long chromium plated shower rail with chromium plated shower rail bracket plugged	No	8	
Carried Forward to Summary of Section No. 8				R
Building Works - 28 Units				
Bill No.9 - Ironmongery				

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Item No	Quantity	Rate	Amount
<u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u>			
<u>BILL NO.10 - METALWORK</u>			
<u>(CPAP WORK GROUP 136 UNLESS OTHERWISE STATED)</u>			
NOTE			
<p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p>			
<u>Preambles</u>			
<p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p>			
<p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p>			
<p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</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>			
Carried Forward			R
Building Works - 28 Units Bill No.10 - Metalwork			

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Brought Forward	R
<p>Items described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described</p> <p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres</p> <p><u>Aluminium doors, windows, etc</u></p> <p>Doors and windows shall comply with AAAMSA design criteria</p> <p>Glazing shall comply with SAGGA regulations. Glass shall be as described in the headings to window descriptions. Glass thickness shall comply with SAGGA regulations irrespective of thicknesses shown on the schedules/drawings</p> <p>Doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed</p> <p>The following certificates shall be provided prior to commencement of site work:</p> <ol style="list-style-type: none"> 1. A copy of the relevant AAAMSA Performance Test Certificate from the manufacturer/contractor supplying the architectural aluminium product 2. A Certificate of Conformance confirming that anodising or powder coating has been processed in accordance with SANS 999 and SANS 1796 respectively 3. A powder guarantee of not less than 15 years issued by the powder manufacturer. The specific conditions contained in this guarantee shall form part of the powder coating process 4. A Certificate of Conformance confirming that glazing has been installed in accordance with SANS 0137, ensuring that safety glazing materials have been installed in the mandatory areas and that each individual pane of safety glazing materials has been permanently marked 5. A warranty from the manufacturer of the laminated safety glass and/or hermetically sealed glazing units guaranteeing the products against delamination and colour degradation for a period of not less than five years 	
Carried Forward	R
<p>Building Works - 28 Units</p> <p>Bill No.10 - Metalwork</p>	

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Brought Forward			R
<u>GALVANISED STEEL POWDER COATED GATES, SCREENS, ETC</u>			
<u>"Trellidoor" or similar approved galvanised steel powder coated security gates, with and including slam lock fixed to brickwork or concrete, for opening</u>			
1	Size 1000 x 2100mm high	No	4
2	Size 3000 x 2100mm high	No	4
<u>POWDER COATED ALUMINIUM WINDOWS, DOORS, ETC BY AAAMSA MEMBERS ONLY AND PROVIDE AAAMSA PERFORMANCE TEST CERTIFICATE</u>			
<u>Casement pre-glazed top hung aluminium windows complete with ironmongery and including setting up, building in, filling back of frame with cement mortar, sealing around with silicone, etc</u>			
3	Window type PT612 size 600 x 1200mm glazed with 6.38mm clear laminated safety glass.	No	8
4	Window type PT615 size 600 x 1500mm glazed with 6.38mm clear laminated safety glass.	No	4
5	Window type PT1518 size 1500 x 1800mm glazed with 6,38mm clear laminated safety glass.	No	12
<u>Pre-glazed aluminium hinged doors, sidelights, etc complete with ironmongery and including setting up, building in, filling back of frame with cement mortar, sealing around same with silicone, etc</u>			
6	Door type SHG1R2, size 900 x 2100mm high overall	No	4
7	Stable door type SDG1R1, size 900 x 2100mm high overall	No	5
Carried Forward			R
Building Works - 28 Units Bill No.10 - Metalwork			

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	Brought Forward			R
	<u>Palace pre-glazed aluminium sliding doors, sidelights, etc complete with ironmongery and including setting up, building in, filling back of frame with cement mortar, sealing around same with silicone, etc</u>			
8	Door type SD3021OXXO, size 3000 x 2100mm high overall	No	4	
	<u>STEEL BURGLAR BARS</u>			
	<u>Burglar bars comprising of 25 x 5mm flat horizontal bars at 110mm centres and 25 x 5mm flat vertical bars at 300mm centres, bolted to walls with one-way countersunk bolts:</u>			
9	Ditto, but 600 x 1200mm.	No	8	
10	Ditto, but 600 x 1500mm	No	4	
11	Ditto, but 1500 x 1800mm	No	12	
	<u>ALUMINIUM LOUVRE UNITS</u>			
	<u>POWDER COATED HORIZONTAL ALUMINIUM LOUVRE UNITS</u>			
	<u>"Trox" or similar approved fixed louvre units fixed to brickwork or concrete</u>			
12	Standard louvre unit type AGS-T, 600 x 600mm high	No	4	
	<u>SHOWER CUBICLE PANELS AND DOORS</u>			
	<u>Powder coated aluminium shower cubicle panels and doors with frames, sliding gear, pivot hinges,cleats, stops, etc. and 6mm toughened clear safety glass, plugged to tiled walls and sealed with silicone sealant (sizes to be verified on site):</u>			
13	Fixed panel approximate size 300 x 1800mm high	No	4	
14	Fixed panel approximate size 800 x 1800mm high	No	4	
15	Sliding door approximate size 960 x 1800mm high	No	4	
	Carried Forward to Summary of Section No. 8			R
	Building Works - 28 Units			
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	Brought Forward			R
	<u>GRANOLITHIC</u>			
	<u>Untinted granolithic, on concrete</u>			
3	30mm Thick on floors and landings	m2	11	
	<u>INTERNAL PLASTER</u>			
	<u>Cement plaster wood floated for tiles, on brickwork</u>			
4	On walls	m2	294	
5	On narrow widths not exceeding 300mm wide	m2	5	
	<u>Cement plaster steel trowelled, on brickwork</u>			
6	On walls	m2	840	
7	On narrow widths not exceeding 300mm wide	m2	20	
	<u>Gypsum skim plaster finishing coat on plastered walls</u>			
8	On walls	m2	840	
9	On ceilings	m2	177	
10	On narrow widths not exceeding 300mm wide	m2	20	
	<u>EXTERNAL PLASTER</u>			
	<u>Cement plaster wood floated, on brickwork</u>			
11	On walls	m2	463	
12	On balustrade walls	m2	18	
13	On narrow widths not exceeding 300mm wide	m2	20	
14	On sloping top, front edge and projecting soffit of sills 300mm girth	m	25	
	<u>Rough-cast plaster, on brickwork</u>			
15	On walls	m2	70	
	Carried Forward			R
	Building Works - 28 Units			
	Bill No.11 - Plastering			

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Brought Forward			R
16	On narrow widths not exceeding 300mm wide	m2	7
<u>AIR GRATINGS</u>			
17	235 x 157mm Cast plaster or white plastic plain pattern air grating fixed flush with plaster face	No	28
<u>CORNER PROTECTORS, DIVIDING STRIPS, ETC</u>			
18	3 x 25mm Flat section galvanised mild steel dividing strip set on edge in screed between different floor finishes	m	13
Carried Forward to Summary of Section No. 8			R
Building Works - 28 Units			
Bill No.11 - Plastering			

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Item No	Quantity	Rate	Amount
<u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u>			
<u>BILL NO.12 - TILING</u>			
<u>(CPAP WORK GROUP 142 UNLESS OTHERWISE STATED)</u>			
NOTE			
<p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p>			
<u>Preambles</u>			
<p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p>			
<p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p>			
<p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
<u>Patterns</u>			
<p>Unless otherwise described, tiles shall be laid with continuous joints in both directions</p>			
Carried Forward			R
Building Works - 28 Units Bill No.12 - Tiling			

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ASSOCIATED INFRASTRUCTURE

Brought Forward	R
<p><u>Fixing</u></p> <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 as recommended by the manufacturer of the tiles</p> <p><u>Repairs</u></p> <p>Repairs to damaged areas in the existing concrete surface bed or slab is to be done using "TAL Superscreed"</p> <p><u>Grouting joints</u></p> <p>Joints to be 3 to 5mm maximum width</p> <p><u>Prime Cost (PC) Sums</u></p> <p>Prime Cost (PC) Sums means an amount of money provided in the bills of quantities for material and goods to be obtained from a supplier nominated by the architect and to be fixed by the contractor</p> <p>The prime cost amount shall be omitted from the contract sum and the amounts actually paid by the contractor in respect of the purchase of the nett quantity of such items including delivery to site shall be added to the contract sum</p> <p>The contractor has to allow for labour, profit and waste in his rate over and above the PC amount</p>	
<p style="text-align: right;">Carried Forward</p> <p>Building Works - 28 Units Bill No.12 - Tiling</p>	<p style="text-align: right;">R</p>

ACACIA PARK
DEMOLITION OF 113 ACCOMODATION STRUCTURES
CONSTRUCTION OF REPLACEMENT ACCOMODATION &
ASSOCIATED INFRASTRUCTURE

Brought Forward			R
<u>WALL TILING</u>			
<u>Allow the prime cost amount of R250/m2 (Two hundred and Fifty Rand) for ceramic tiles not exceeding 300 x 300mm for the supply and delivery to site, fixed with adhesive to plaster (plaster elsewhere) and flush pointed with tinted grout</u>			
1	On walls	m2	192
2	On walls in isolated panels, splashbacks, etc not exceeding 1m ²	m2	51
3	On narrow widths not exceeding 300mm	m2	19
<u>FLOOR TILING</u>			
<u>Allow the prime cost amount of R300/m2 (Three hundred rand) for full bodied porcelain floor tiles not exceeding 600 x 600mm the supply and delivery to site, fixed with adhesive to screed (screed elsewhere) and flush pointed with grout</u>			
4	On floors and landings	m2	137
5	On narrow widths not exceeding 300mm wide	m2	14
6	Skirting 100mm high of cut tiles	m	48
<u>SUNDRIES</u>			
<u>"M-Trim" or similar approved aluminium dividing strips</u>			
7	5mm Straight edge trim (code ASE050)	m	14
8	12mm Straight edge trim (code ASE120)	m	10
Carried Forward to Summary of Section No. 8			R
Building Works - 28 Units			
Bill No.12 - Tiling			

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Item No	Quantity	Rate	Amount
<u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u>			
<u>BILL NO.13 - PLUMBING AND DRAINAGE</u>			
<u>(CPAP WORK GROUP 146 and 148 UNLESS OTHERWISE STATED)</u>			
NOTE			
<p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p>			
<u>Preambles</u>			
<p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p>			
<p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p>			
<p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
<u>Supplementary Preambles</u>			
<u>uPVC pipes and fittings:</u>			
<p>Soil, waste and vent pipes and fittings shall be solvent weld jointed</p>			
Carried Forward			R
Building Works - 28 Units Bill No.13 - Plumbing and Drainage			

ACACIA PARK
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CONSTRUCTION OF REPLACEMENT ACCOMODATION &
ASSOCIATED INFRASTRUCTURE

Brought Forward	R
<p><u>Copper pipes:</u></p> <p>Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), class 2 (half-hard) and class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or in ground. All pipes that are not chased on brickwork shall be tagged.</p> <p><u>Reducing fittings</u></p> <p>Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained</p> <p><u>Wire gratings</u></p> <p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings</p> <p><u>Exposed concrete surfaces</u></p> <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> <p><u>Flush pans</u></p> <p>Flush pans shall have straight or side outlets and "P" or "S" traps as necessary</p>	
Carried Forward	R
<p>Building Works - 28 Units Bill No.13 - Plumbing and Drainage</p>	

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CONSTRUCTION OF REPLACEMENT ACCOMODATION &
ASSOCIATED INFRASTRUCTURE

Brought Forward			R
<p><u>Stainless steel basins, sinks, wash troughs, urinals, etc.</u></p> <p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable</p> <p><u>Waste unions</u></p> <p>Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings</p> <p><u>Note:</u> All specifications must be adhered to or equivalent to principal agents approval.</p> <p><u>Product Specifications</u></p> <p>Where a brand name is mentioned, "similar approved" by the project manager can be priced</p> <p><u>RAINWATER DISPOSAL</u></p> <p><u>Seamless aluminium prepainted gutters and rainwater pipes</u></p>			
1	125 x 85mm x 0,6mm Thick Ogee gutter including brackets fixed to fibre cement fascias	m	47
2	Extra over gutter for stopped end	No	12
3	Extra over gutter for outlet for 76mm	No	8
<u>'Marley Vynadeep' uPVC or similar approved:</u>			
4	75mm Diameter rainwater pipes	m	43
5	Extra over rainwater pipe for shoe	No	8
6	Extra over rainwater pipe for eaves or plinth offset	No	8
7	Spreader for 75mm pipe	No	4
Carried Forward			R
Building Works - 28 Units Bill No.13 - Plumbing and Drainage			

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Brought Forward			R
<u>SANITARY FITTINGS</u>			
<u>"Franke" or similar approved</u>			
8	1200 x 535mm "Trendline 721" double end bowl sink fixed to countertop with clear silicone	No	4
<u>White glazed vitreous china fittings including assembling and fixing in position, expanding bolts and mortices in brick or concrete walls, connecting up, etc.</u>			
9	470 x 415mm, "Kite" white vitreous china corner basin (code 700100WH) with one taphole, including integrated overflow and chainstay	No	4
10	495 x 430 x 190mm, "Cobra shelter" white vitreous china basin (code CSHBAWH2-6DT01) with one taphole, including integrated overflow.	No	4
11	"Cobra Welcome" Close coupled toilet suite. Top, dual flush capability with 3L and 6L flush available. Box rim. Package cistern and cistern fittings, pan, seat and cover, connector and installation manual. Cistern manufactured with left hand side inlet hole only as per European standard.	No	8
<u>"Libra" or similar approved:</u>			
12	1 000 x 1 000 x 150mm "Cola 90°" white acrylic shower tray, set in cement mortar bedding and pointed all around with mildew resistant silicon sealant	No	4
13	1100 X 1530 X 790mm "Libra Petra" corner built-in bath	No	4
<u>WASTE UNIONS ETC</u>			
<u>"Cobra" Watertech</u>			
14	32mm "302-32" Slotted Basin waste	No	8
15	38mm "316" Sink waste union	No	4
16	"309-32" Anti Theft Plug fitted to unslotted basin waste (waste elsewhere)	No	8
Carried Forward			R
Building Works - 28 Units Bill No.13 - Plumbing and Drainage			

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CONSTRUCTION OF REPLACEMENT ACCOMODATION &
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	Brought Forward			R
17	50mm Brass shower waste with 75mm diameter chrome plated shower grating (VA3.334-4)	No	4	
18	40mm CP "318" Bath waste unslotted clicker.	No	4	
	<u>PVC</u>			
19	50mm Deep seal P-trap	No	4	
	<u>"Franke" or similar approved</u>			
20	Spazio 2 plumbing kit	No	4	
	<u>"Cobra Watertech"</u>			
21	32mm "345/50 CP" bottle trap	No	8	
22	38mm "373" Shower P-trap with chrome plated grating	No	4	
	<u>TAPS, VALVES, ETC</u>			
	<u>Brass</u>			
23	22mm Stopcock	No	8	
	<u>"Cobra" or similar approved</u>			
24	15mm Chrome plated angle regulating valve with 350mm long flexible service connection (product code 832/350F)	No	24	
25	15mm Chrome plated 'Star' underwall F x F stoptap (product code FSTCF2C1-7FT01)	No	16	
26	Chrome Plated Nile Basin Mixer NL-951 (Product Code FBN1D1NI-0GT0426)	No	8	
27	Chrome Plated Nile Deck Type Sink Mixer NL-970 (Product Code FBN1D1NI-0GT0426)	No	4	
28	Nile exposed bath mixer (no hand shower) single lever with diverter (Product Code FBHEW2NI-0GT0426)	No	4	
29	15mm Rough brass hose bibtap with 20mm BSP hose union (product code 108-15)	No	4	
	Carried Forward			R
	Building Works - 28 Units Bill No.13 - Plumbing and Drainage			

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	Brought Forward			R
	<u>"Grohe" or similar approved</u>			
30	Tempesta cosmopolitan 100 head shower set (Product Code G-26090001)	No	4	
31	BauEdge Single-Lever Shower Mixer (Product Code G-29040001)	No	4	
	<u>SANITARY PLUMBING</u>			
	<u>PVC-U soil and vent pipes</u>			
32	40mm Pipes	m	48	
33	50mm Pipes	m	72	
34	Not exceeding 50mm pipes chased into brickwork (pipe elsewhere)	m	36	
	<u>Extra over PVC-U soil and vent pipes for fittings</u>			
35	50mm "GI Two-Way" vent valve.	No	8	
36	50mm BSP adaptor	No	8	
37	110mm Pan connector	No	8	
38	40mm Bend or junction	No	12	
39	50mm Bend or junction	No	18	
40	110mm Bend or junction	No	8	
	<u>WATER SUPPLIES</u>			
	<u>Pex-Al-Pex or equal approved multilayer pipe for hot water & heating with press fittings</u>			
41	15mm Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases), in concrete, etc.	m	175	
42	20mm Pipes, ditto	m	116	
	Carried Forward			R
	Building Works - 28 Units Bill No.13 - Plumbing and Drainage			

ACACIA PARK
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	Brought Forward			R
	<u>Extra over press fittings</u>			
43	16mm Fittings	No	52	
44	20mm Fittings	No	35	
	<u>Class 2 copper pipes with brass compression couplings</u>			
45	22mm Pipe,Pipe and fixing to walls, floors, in roofs, soffit of concrete slab, in chases (including chases) including brown paper lagging, in concrete, etc.	m	87	
	<u>Extra over Class 2 copper pipes for brass compression fittings</u>			
46	22mm Fittings	No	26	
	<u>Brass fittings including couplings to copper</u>			
47	22mm Hose bibtap as Cobra 108 including wallplate elbow plugged to wall	No	4	
48	15mm Stopcock as Cobra 131	No	6	
49	22mm Non-return valve	No	4	
50	22mm Pressure reducing valve	No	4	
51	22mm In-line strainer	No	4	
52	22mm Vacuum breaker	No	8	
53	22mm Automatic air vent/valve	No	4	
54	22mm Pressure safety valve	No	4	
55	PA1.1RB "Kwikflo" 400 kPa pressure reducing valve	No	4	
56	150l Electric Geyser 400kPa horizontally mounted with TP Safety Valve installed complete, including brass pressure reducing/expansion relieve valve, No.2 vacuum breaker and connecting to supply and outlet pipes and electrical supply	No	4	
	Carried Forward			R
	Building Works - 28 Units Bill No.13 - Plumbing and Drainage			

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	Brought Forward			R
57	Drip Tray to suit 150l HWC, including 3m long 40mm uPVC overflow pipe	No	4	
58	Insulation Blanket for 150l HWC	No	4	
59	Supply and Install "Alliance ALLHT35R134" 3.5 kW Heat Pump complete, including controller, interconnecting piping and cabling, including galvanised brackets	No	4	
<u>FIRE APPLIANCES ETC</u>				
60	4,5Kg dry chemical powder fire extinguisher plus painted back board	No	4	
<u>PIPE INSULATION</u>				
<u>Thermaflex Preformed Polyethylene foam lagging</u>				
61	Thermaflex preformed polyethylene foam lagging or similar approved insulation wrapped around 15mm pipe and fittings	m	52	
62	Ditto, but around 22mm pipe	m	78	
<u>TESTING</u>				
63	Test hot & cold water pipe system		Item	
64	Test waste pipe system		Item	
65	Supply and handing over of detailed as-built drawings of the plumbing and drainage works as per the approved design and supply provided		Item	
 Carried Forward to Summary of Section No. 8				
Building Works - 28 Units				
Bill No.13 - Plumbing and Drainage				
				R

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Item No	Quantity	Rate	Amount
<u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u>			
<u>BILL NO.14 - ELECTRICAL WORK</u>			
<u>(CPAP WORK GROUP 160 UNLESS OTHERWISE STATED)</u>			
<u>Preambles</u>			
<p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p>			
<p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p>			
<p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
<u>Supplementary Preambles</u>			
<u>Specifications, drawings, etc.:</u>			
<p>Tenderers are referred to the specification accompanying these bills of quantities for the electrical work, for the full descriptions of the following items which are to be read and priced in conjunction with the said specification</p>			
Carried Forward			R
Building Works - 28 Units Bill No.14 - Electrical Work			

ACACIA PARK
DEMOLITION OF 113 ACCOMODATION STRUCTURES
CONSTRUCTION OF REPLACEMENT ACCOMODATION &
ASSOCIATED INFRASTRUCTURE

Brought Forward	R
<p><u>Distribution boards, etc:</u></p> <p>Rates for distribution boards etc are to include for busbars, jumpers, neutral bars, internal wiring and connections, circuit identification markers, control gear labels, circuit legend cards and working drawings</p> <p><u>Switches, socket outlets, etc:</u></p> <p>Rates for switches, socket outlets, etc are to include for screwing to outlet boxes, connecting up and cover plates</p> <p><u>Light fittings:</u></p> <p>Rates for light fittings are to include for hanging, fixing and connecting and for lamp holders and fluorescent tubes and lamps of the type and wattage described</p> <p><u>Liaison with Local Authority</u></p> <p>Liaise with the Local Authority with regard to compliance with the National Building Regulations, Local By-laws and any other Statutory Regulations.</p> <p><u>Concurrent with Building Work:</u></p> <p>The electrical work in this service shall be carried out concurrently with the building work. The electrical contractor shall liaise closely with the building contractor</p> <p><u>Handing over existing materials:</u></p> <p>Where certain materials or articles are described as to be handed over by the contractor to the Department's Representative or Representative/Agent such materials or articles shall be properly stored by the contractor until handing over thereof. The contractor must obtain an official receipt listing the materials or articles and dates of handover. If the contractor fails to submit the receipt when requested to do so it shall be deemed that the materials or articles are still in his possession and he will be held liable to the Department for the full replacement value thereof which amount will be deducted from any monies due to the contractor.</p>	
Carried Forward	R
<p>Building Works - 28 Units</p> <p>Bill No.14 - Electrical Work</p>	

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ASSOCIATED INFRASTRUCTURE

Brought Forward			R
<u>ELECTRICAL INSTALLATION</u>			
Budgetary allowance for the complete electrical installation including power skirting or rails, light fittings, etc and builder's work but excludes primary transformers			
1	Wiring and accessories	PS	140,000.00
2	Lighting and accessories	PS	140,000.00
3	Socket outlets	PS	24,000.00
4	Isolators	PS	14,000.00
5	Distribution boards complete with essential and non-essential switchgear and accessories	PS	22,000.00
6	Labelling sum	PS	12,000.00
7	Intruder alarm detection	PS	60,000.00
8	Intercom/access control	PS	30,000.00
Carried Forward to Summary of Section No. 8			
Building Works - 28 Units			
Bill No.14 - Electrical Work			

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u> <u>BILL NO.15 - MECHANICAL WORK</u> <u>(CPAP WORK GROUP 170 UNLESS OTHERWISE STATED)</u> NOTE The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager. <u>Preambles</u> The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards. Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications. The Standard Preambles and the Notes in the various trade bills are to apply equally to this section. <u>FANS (Supply and Install, including anti vibration mountings, canvas collars and brackets)</u>			
1	Supply and install bathroom extraction fans "Xpelair BX100C" or similar complete with ducting and grilles as supplied.	No	8	
	Carried Forward		R	
	Building Works - 28 Units Bill No.15 - Mechanical Work			

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**DEMOLITION OF 113 ACCOMODATION STRUCTURES
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Brought Forward			R
<u>WEATHER LOUVRES AND DOOR GRILLES ("AGS TROX")</u>			
2	Door grill, 300x300	No	12
3	Weatherproof wall grill louvre 600x600mm	No	4
Carried Forward to Summary of Section No. 8 Building Works - 28 Units Bill No.15 - Mechanical Work			R

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Item No	Quantity	Rate	Amount
<u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u>			
<u>BILL NO.16 - GLAZING</u>			
<u>(CPAP WORK GROUP 150 UNLESS OTHERWISE STATED)</u>			
NOTE			
<p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p>			
<u>Preambles</u>			
<p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p>			
<p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p>			
<p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
<u>Float glass</u>			
<p>The term "float glass" is used for monolithic annealed glass</p>			
Carried Forward			R
Building Works - 28 Units Bill No.16 - Glazing			

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ASSOCIATED INFRASTRUCTURE

Brought Forward			R
<u>Laminated glass</u>			
Laminated glass to have polyvinyl butyral (PVB) interlayer(s)			
<u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u>			
<u>5mm Silvered float glass copper backed mirrors with polished edges, holed for and fixed with chromium plated dome capped mirror screws with rubber buffers to plugs in brickwork or concrete</u>			
1	Mirror 600 x 900mm high with four screws	No	4
2	Mirror 800 x 1200mm high with six screws	No	4
Carried Forward to Summary of Section No. 8			R
Building Works - 28 Units			
Bill No.16 - Glazing			

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CONSTRUCTION OF REPLACEMENT ACCOMODATION &
ASSOCIATED INFRASTRUCTURE

Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u></p> <p><u>BILL NO.17 - PAINTWORK</u></p> <p><u>(CPAP WORK GROUP 152 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
	Carried Forward		R	
	<p>Building Works - 28 Units</p> <p>Bill No.17 - Paintwork</p>			

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CONSTRUCTION OF REPLACEMENT ACCOMODATION &
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Brought Forward				R
<u>Supplementary Preambles</u>				
<u>Colours</u>				
Unless otherwise described paintwork on ceilings shall be deemed to be in the "White" colour group and paintwork on all other components shall be deemed to be in the "Pastel" colour group in accordance with the Natural Colour System (NCS) adopted by the SA National Standards				
<u>PAINTWORK ETC TO NEW WORK</u>				
<u>ON INTERNAL FLOATED PLASTER SURFACES</u>				
<u>One coat alkali resistant primer and two coats premium quality ultra matt, fully washable and stain resistant acrylic emulsion paint for interior use</u>				
1	Walls	m2	37	
<u>ON EXTERNAL FLOATED PLASTER SURFACES</u>				
<u>One coat alkali resistant primer and two coats extremely durable UV-resistant waterbased mica reinforced fine textured acrylic paint</u>				
2	Walls	m2	504	
<u>ON EXTERNAL TEXTURED PLASTER SURFACES</u>				
<u>One coat alkali resistant primer and two coats extremely durable UV-resistant waterbased mica reinforced fine textured acrylic paint</u>				
3	Walls	m2	12	
4	Mouldings and bands picked out in colours differing from surrounding work	m2	40	
Carried Forward				R
Building Works - 28 Units Bill No.17 - Paintwork				

**ACACIA PARK
DEMOLITION OF 113 ACCOMODATION STRUCTURES
CONSTRUCTION OF REPLACEMENT ACCOMODATION &
ASSOCIATED INFRASTRUCTURE**

Brought Forward			R
<u>ON INTERNAL GYPSUM PLASTER SURFACES</u>			
<u>One coat alkali resistant primer and two coats premium quality ultra matt, fully washable and stain resistant acrylic emulsion paint for interior use</u>			
5	Skimmed plasterboard ceilings	m2	177
6	Walls	m2	860
<u>ON FIBRE-CEMENT BOARD SURFACES</u>			
<u>One coat alkali resistant primer and two coats superior quality acrylic emulsion paint for interior and exterior use</u>			
7	Ceilings and cornices, including priming metal cover strips and nailheads	m2	24
<u>Two coats extremely durable UV-resistant, washable pure acrylic emulsion sheen paint</u>			
8	Fascias and barge boards, including priming metal jointing strips	m2	22
<u>ON METAL SURFACES</u>			
<u>Remove all traces of protective coating from galvanised surfaces with galvanised iron cleaner and apply one coat self etching primer, one coat alkyd based universal undercoat and two coats superior quality universal enamel paint, on galvanised steel</u>			
9	Gates, grilles, burglar screens, balustrades, etc (both sides measured over the full flat area)	m2	84
<u>ON WOOD SURFACES</u>			
<u>Two coats oil wood primer</u>			
10	Backs of frames, linings, etc not exceeding 300mm wide	m	389
Carried Forward			R
Building Works - 28 Units Bill No.17 - Paintwork			

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**DEMOLITION OF 113 ACCOMODATION STRUCTURES
CONSTRUCTION OF REPLACEMENT ACCOMODATION &
ASSOCIATED INFRASTRUCTURE**

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**ACACIA PARK
DEMOLITION OF 113 ACCOMODATION STRUCTURES
CONSTRUCTION OF REPLACEMENT ACCOMODATION &
ASSOCIATED INFRASTRUCTURE**

Item No		Quantity	Rate	Amount
<u>SECTION NO. 8 - BUILDING WORKS - 28 UNITS</u>				
<u>BILL NO.18 - PROVISIONAL AMOUNTS</u>				
<u>Provisional Sum for Four plate stove per block comprising 4 Units</u>				
1	Provide the sum of R80,000.00 (Eighty Thousand Rands) for four plate stove.	PS		80,000.00
2	Contractors Markup		%	
<u>Provisional Sum for Wall mounted folded Washing line per block comprising 4 Units</u>				
3	Provide the sum of R12,000.00 (Twelve Thousand Rands) for wall mounted washing lines.	PS		12,000.00
4	Contractors Markup		%	
<u>Provisional Sum for Bedroom & kitchen joinery per block comprising 4 Units</u>				
5	Provide the sum of R340,000.00 (Three Hundred and forty Thousand Rands) for bedroom and kitchen joinery.	PS		340,000.00
6	Contractors Markup		%	
<u>Provisional Sum for decanting</u>				
7	Provide the sum of R36,000.00 (Thirty Six Thousand Rand) for decanting, 4 units at a time.	PS		36,000.00
8	Contractors Markup		%	
<u>Provisional Sum for steel carports per block comprising 4 Units</u>				
9	Provide the sum of R50,000.00 (Fifty Thousand Rand) for 4 No. steel carports	PS		50,000.00
10	Contractors Markup		%	
Carried Forward			R	
Building Works - 28 Units Bill No.18 - Provisional Amounts				

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Brought Forward			R
<u>Provisional Sum for Geotechnical Investigation per block comprising 4 Units</u>			
11	Provide the sum of R6,000.00 (Six Thousand Rands) per block, i.e. 4 units per geotechnical investigation.	PS	6,000.00
12	Contractors Markup	%	
<u>Provisional Sum for balustrading per block comprising 4 Units</u>			
13	Provide the sum of R60,000.00 (Sixty Thousand Rands) per block	PS	60,000.00
14	Contractors Markup	%	
<u>Provisional Sum for fencing and gates per block comprising 4 Units</u>			
15	Provide the sum of R40,000.00 (Forty Thousand Rands) per block for fencing and gates	PS	40,000.00
16	Contractors Markup	%	
<u>Provisional Sum for plan scrutiny fees per block comprising 4 Units)</u>			
17	Provide the sum of R48,000.00 (Forty Eight Thousand Rand) for plan scrutiny fees per block 4 No.	PS	48,000.00
18	Contractors Markup	%	
<u>Provisional Sum for N.H.B.R.C enrolment certificate per unit.</u>			
19	Provide the sum of R134,000.00 (One Hundred and Thirty Four Thousand Rand) for N.H.B.R.C enrolment certificates per unit (R33,500.00 x 4).	PS	134,000.00
20	Contractors Markup	%	
Carried Forward to Summary of Section No. 8			
Building Works - 28 Units			
Bill No.18 - Provisional Amounts			

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Building Works - 28 Units				
<u>SECTION SUMMARY - Building Works - 28 Units</u>				
Bill No		Page No		Amount
1	Bill No.1 - Earthworks	125		
2	Bill No.2 - Concrete, Formwork and Reinforcement	130		
3	Bill No.3 - Masonry	134		
4	Bill No.4 - Waterproofing	136		
5	Bill No.5 - Roof Coverings, etc	139		
6	Bill No.6 - Carpentry and Joinery	143		
7	Bill No.7 - Ceilings	148		
8	Bill No.8 - Floor Coverings, etc	152		
9	Bill No.9 - Ironmongery	155		
10	Bill No.10 - Metalwork	159		
11	Bill No.11 - Plastering	162		
12	Bill No.12 - Tiling	165		
13	Bill No.13 - Plumbing and Drainage	173		
14	Bill No.14 - Electrical Work	176		
15	Bill No.15 - Mechanical Work	178		
16	Bill No.16 - Glazing	180		
17	Bill No.17 - Paintwork	184		
18	Bill No.18 - Provisional Amounts	186		
	SUBTOTAL		R	
	Multiplied by an additional 6 Blocks	No 6		
	Carried Forward		R	
	Building Works - 28 Units			

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Item No	Quantity	Rate	Amount
<p><u>SECTION NO. 9 - EXTERNAL/CIVIL WORKS</u> <u>- 28 UNITS</u></p> <p><u>BILL NO.1 - EXTERNAL WORKS</u></p> <p><u>(CPAP WORK GROUP 104,112,136 & 154</u> <u>UNLESS OTHERWISE STATED)</u></p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Nature of ground</u></p> <p>The nature of the ground is unknown and the contractor is to make his own assessment and due allowance for same</p> <p><u>Subterranean water</u></p> <p>The nature of the ground is unknown and the contractor is to make his own assessment and due allowance for same</p>			
Carried Forward		R	
<p>External/Civil Works - 28 Units Bill No.1 - External Works</p>			

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ASSOCIATED INFRASTRUCTURE

Brought Forward	R
<p><u>Carting away of excavated material</u></p> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p> <p><u>Working Space</u></p> <p>Working space for any work requiring formwork, brick linings, etc, has been determined by the following conditions and shall be measured where:</p> <ol style="list-style-type: none"> 1. The depth of the excavation does not exceed 1000mm and the distance from the finished face of the structure to the excavated face is less than 250mm for formwork or 600mm for brick linings and 2. The depth of the excavation exceeds 1000mm and the distance from the finished face of the structure to the excavated face is less than 600mm <p><u>Filling and layer work materials</u></p> <p>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</p> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series</p> <p><u>Testing of material and filling</u></p> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series</p>	
Carried Forward	R
<p>External/Civil Works - 28 Units</p> <p>Bill No.1 - External Works</p>	

ACACIA PARK
DEMOLITION OF 113 ACCOMODATION STRUCTURES
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Brought Forward			R
<u>Precast concrete block road surfacing</u>			
Paving shall be laid in accordance with SABS 1200 MJ, SANS 1058 and the Concrete Masonry Association's specifications			
<u>SITE CLEARANCE (CPAP WORK GROUP 104)</u>			
<u>Site clearance</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m2	423
<u>FILLING, ETC</u>			
<u>G5 Earth filling from commercial sources supplied by the Contractor in accordance with SABS 1200 DM, compacted to 95% Mod AASHTO density</u>			
2	150mm Base/Sub-Base layers	m3	20
<u>G7 Earth filling from commercial sources supplied by the Contractor in accordance with SABS 1200 DM, compacted to 90% Mod AASHTO density (100% for sand).</u>			
3	150mm Over site to make up levels	m3	70
<u>C4 Cementitious stabilisation in accordance with SABS 1200 DM compacted to 98% Mod AASHTO density</u>			
4	150mm Over site to road and parking areas	m3	48
<u>Compaction of surfaces</u>			
5	Compaction of natural or excavated ground surface under parking areas etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density	m2	423
<u>Prescribed density tests on filling:</u>			
6	"Modified AASHTO Density" test	No	15
Carried Forward			R
External/Civil Works - 28 Units Bill No.1 - External Works			

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Brought Forward			R
<u>PAVING ETC (CPAP WORK GROUP 118)</u>			
<u>Allow the prime cost amount of R200/m2 (two hundred Rand) for the supply and delivery to site of paving of 450 x 450 x 50mm precast concrete block paving slabs laid on 30mm thick river sand bed</u>			
7	Paving of slabs laid with 25mm wide joints jointed with mortar and flush pointed, laid to falls.	m2	105
<u>Allow the prime cost amount of R6 000.00 (six thousand rand) per thousand for paving bricks in accordance with SANS 1058 delivered to site, laid to falls on and including 25mm thick sand layer with joints filled in with sand, compacted with a vibration compactor</u>			
8	80mm Thick 35MPa precast concrete interlocking block paving of 200 x 100mm paving blocks to stretcher, herringbone or basket weave pattern including forming soldier course perimeter margin	m2	313
<u>PRECAST CONCRETE (CPAP WORK GROUP 112)</u>			
<u>Precast concrete kerbs finished smooth on exposed surfaces, bedded on a 50mm thick x 500mm wide layer of unreinforced concrete with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint and jointed in 3.1 cement mortar, including excavation, backfilling, etc</u>			
9	150 x 250mm High kerbs (BK2/SANS 927 fig 4)	m	40
<u>Precast concrete kerbs finished smooth on exposed surfaces, bedded on a 50mm thick x 500mm wide layer of unreinforced concrete and jointed in 3.1 cement mortar, including excavation, backfilling, etc</u>			
10	300 x 125mm high channels (C1/SANS 927 fig 14)	m	40
Carried Forward			R
External/Civil Works - 28 Units Bill No.1 - External Works			

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Brought Forward			R
	<p><u>Precast concrete kerbs finished smooth on exposed surfaces, bedded on a 50mm thick x 175mm wide layer of unreinforced concrete with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint and jointed in 3.1 cement mortar, including excavation, backfilling, etc</u></p>		
11	75 x 150mm High kerbs (E1/SANS 927 fig 11)	m	90
	<u>ROOT BARRIERS</u>		
12	Biobarrier' or similar 750mm deep vertical root barriers.	m	140
<p>Carried Forward to Summary of Section No. 9</p> <p>External/Civil Works - 28 Units</p> <p>Bill No.1 - External Works</p>			R

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Item No	Quantity	Rate	Amount
<u>SECTION NO. 9 - EXTERNAL/CIVIL WORKS</u> <u>- 28 UNITS</u>			
<u>BILL NO.2 - PLUMBING AND DRAINAGE</u>			
<u>(CPAP WORK GROUP 146 and 148 UNLESS OTHERWISE STATED)</u>			
NOTE			
<p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p>			
<u>Preambles</u>			
<p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p>			
<p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p>			
<p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
<u>Wire gratings</u>			
<p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings</p>			
Carried Forward			R
External/Civil Works - 28 Units Bill No.2 - Plumbing and Drainage			

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Brought Forward	R
<p><u>Stormwater channels</u></p> <p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc, and disposal of surplus material on site</p> <p><u>Exposed concrete surfaces</u></p> <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> <p><u>Sealing of edges</u></p> <p>Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone</p> <p><u>Reducing fittings</u></p> <p>Where fittings have reducing ends or branches they are described as "reducing" and 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</p> <p><u>uPVC pipes and fittings</u></p> <p>Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings</p> <p>Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings</p> <p><u>uPVC pressure pipes and fittings</u></p> <p>Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings</p> <p>Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints</p>	
Carried Forward	R
<p>External/Civil Works - 28 Units</p> <p>Bill No.2 - Plumbing and Drainage</p>	

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Brought Forward	R
<p><u>High density polyethylene (HDPE) pipes and fittings</u></p> <p>Pipes shall be type IV and of the class specified with "Plasson" or "Alprene" compression fittings</p> <p><u>"Polycop" polypropylene pipes</u></p> <p>Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings</p> <p>Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions</p> <p><u>Copper pipes</u></p> <p>Pipes shall be hard drawn and half-hard "Maksal" pipes of the class described. 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. Capillary solder fittings shall comply with ISO 2016</p> <p>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</p> <p><u>Fixing of pipes</u></p> <p>Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc, casting in, building in or suspending not exceeding 1m below suspension level</p>	
Carried Forward	R
<p>External/Civil Works - 28 Units</p> <p>Bill No.2 - Plumbing and Drainage</p>	

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DEMOLITION OF 113 ACCOMODATION STRUCTURES
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Brought Forward	R
<p><u>Stainless steel basins, sinks, wash troughs, urinals, etc</u></p> <p>Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)</p> <p>Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)</p> <p>Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)</p> <p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable</p> <p><u>Paper wrapping to pipes</u></p> <p>Pipes chased into brickwork must be wrapped with two layers of stout brown paper tied with wire. Rates are to include for wrapping around joints and fittings</p> <p><u>Laying, backfilling, bedding, etc of pipes</u></p> <p>Pipes shall be laid and bedded in accordance with manufacturers' instructions and trenches shall be carefully backfilled</p> <p><u>Filling and bedding material</u></p> <p>Selected Fill Material: Selected material shall be material that has a P.I not greater than 6, is free from vegetation and from lumps and stones of diameter > 30mm. This material shall be used for the selected fill blanket</p> <p>Selected Granular Material: Selected granular material shall be of a granular, non-cohesive nature that is singularly graded between .6mm and 19mm, free draining, has a compact ability factor not exceeding .4 or such similar value as is laid down in project specification. For PVC and uPVC the factor is not to exceed the following; 1) 0.1 - Material suitable for all ground conditions 2) 0.3 - Material suitable provided extra care is taken during compaction operation</p>	
Carried Forward	R
<p>External/Civil Works - 28 Units Bill No.2 - Plumbing and Drainage</p>	

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DEMOLITION OF 113 ACCOMODATION STRUCTURES
CONSTRUCTION OF REPLACEMENT ACCOMODATION &
ASSOCIATED INFRASTRUCTURE

Brought Forward				R
<p>Joints:</p> <p>To ensure that each pipe will be fully supported throughout the length of its barrel on the bedding cradle, joint pockets/ holes shall be formed in the bedding cradle for pipe sockets</p> <p>All work below ground shall be carried out in accordance with SANS 1200DB, SANS 1200LB, SANS 1200LD and SANS 1200LE</p> <p><u>General</u></p> <p>Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc and to steel pipes (adaptors for connections to copper pipes, etc are given separately)</p> <p>Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured)</p> <p><u>EARTHWORKS (STORMWATER, SUBSOIL DRAINAGE, STORMWATER DRAINAGE, SLEEVES FOR ELECTRICAL AND TELEPHONE CABLES ETC, SOIL DRAINAGE AND WATER SUPPLIES) (CPAP WORK GROUP 146)</u></p> <p><u>Excavation in earth</u></p>				
1	Excavation in earth not exceeding 1m deep for pipe or cable trenches or chambers including risk of collapse of excavations	m3	75	
2	Excavation in earth exceeding 1m but not exceeding 2m deep for pipe or cable trenches or chambers including risk of collapse of excavations	m3	50	
3	Extra over excavation in earth for pipe and cable trenches or chambers for excavation in soft rock	m3	13	
4	Extra over excavation in earth for pipe and cable trenches or chambers for excavation in hard rock	m3	6	
Carried Forward				R
<p>External/Civil Works - 28 Units</p> <p>Bill No.2 - Plumbing and Drainage</p>				

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	Brought Forward			R
5	Extra over excavation for pipe and cable trenches or chambers for carting away surplus material to a dumping site located by the contractor (This rate 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, and spoiled at a site located by the contractor not exceeding 10km in one direction from the site.	m3	47	
6	Extra over carting away of surplus material further than 10km in one direction from the site	m3	31	
7	Earth filling supplied by contractor to pipe or cable trenches or chambers	m3	25	
8	Earth filling supplied by contractor to pipe or cable trenches compacted or chambers to 95% Mod AASHTO density	m3	22	
9	Imported granular filling in bedding under and filling around pipes	m3	5	
10	Imported sand filling in bedding under and filling around pipes	m3	10	
	<u>CONCRETE (STORMWATER, SUBSOIL DRAINAGE, STORMWATER DRAINAGE, SLEEVES FOR ELECTRICAL AND TELEPHONE CABLES ETC, SOIL DRAINAGE AND WATER SUPPLIES)</u>			
11	15MPa/19mm Concrete in encasing to not exceeding 110mm diameter horizontal pipe of a minimum thickness of 150mm around pipe, including all necessary casing	m	25	
12	15MPa/19mm Concrete in encasing to not exceeding 110mm diameter horizontal bend or junction of a minimum thickness of 150mm around fitting, including all necessary casing	No	18	
13	15MPa/19mm Concrete in thrust block (approximately 0,06 cubic metres) at bends, etc., including casing	No	12	
	Carried Forward			R
	External/Civil Works - 28 Units Bill No.2 - Plumbing and Drainage			

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Brought Forward			R
<u>SLEEVES FOR ELECTRICAL AND TELEPHONE CABLES ETC (CPAP WORK GROUP 171)</u>			
<u>Class 6 PVC-U pipes</u>			
14	50mm Pipes laid in trenches (trenches elsewhere)	m	40
<u>Extra over Class 6 PVC-U pipes for fittings</u>			
15	50mm Long radius bend	No	16
<u>Draw wires</u>			
16	1,6mm Galvanised steel draw wires in pipes	m	40
<u>SOIL DRAINAGE (CPAP WORK GROUP 171)</u>			
<u>Normal duty PVC-U sewer channels</u>			
17	110mm Channels in bottoms of inspection chambers	m	2
<u>Extra over normal duty PVC-U sewer channels for fittings</u>			
18	110mm Bend	No	4
19	110mm Double junction	No	2
<u>Heavy duty (Class 34) PVC-U sewer and drain pipes</u>			
20	110mm Pipes vertically or ramped to cleaning eyes etc (no excavation)	m	20
21	160mm Pipes laid in trenches (trenches elsewhere)	m	20
<u>Extra over heavy duty (Class 34) PVC-U sewer and drain pipes for fittings</u>			
22	110mm Bend	No	12
23	160mm Bend	No	8
24	110mm Junction	No	4
Carried Forward			R
External/Civil Works - 28 Units Bill No.2 - Plumbing and Drainage			

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Brought Forward			R
25	160mm Junction	No	4
26	160mm Reducing junction	No	4
27	110mm Access bend	No	8
28	110mm Access junction	No	4
29	160mm Reducing junction	No	8
30	110mm Rodding eye	No	8
<u>uPVC gulleys</u>			
31	110mm Gulley exceeding 500mm and not exceeding 750mm deep	No	2
<u>Precast concrete circular inspection chambers including precast concrete cover slabs (cast iron covers and frames elsewhere) and channels in benching:</u>			
32	1000mm Diameter inspection chamber not exceeding 1m deep internally	No	2
33	Ditto, but exceeding 1,5m not exceeding 2m deep	No	1
34	Ditto, but exceeding 2m not exceeding 2.5m deep	No	1
<u>Gratings, covers, etc:</u>			
35	Type 2A 635mm diameter cast iron manhole cover and frame	No	4
36	Lifting-key for manhole cover (handed to Employer)	No	4
<u>Testing:</u>			
37	Testing soil drainage system		Item
<u>WATER SUPPLIES (CPAP WORK GROUP 148)</u>			
<u>Class 12 HDPe type V pipes</u>			
38	40mm Pipes laid in trenches (trenches elsewhere).	m	25
Carried Forward			R
External/Civil Works - 28 Units Bill No.2 - Plumbing and Drainage			

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Brought Forward			R
39	50mm Pipes, ditto	m	10
<u>Extra over Class 12 HDPe type V pipes for "Compression Type" fittings</u>			
40	20mm Fittings	No	4
41	32mm Reducer	No	1
42	32mm Elbow	No	2
43	32mm T	No	1
44	40mm Reducer	No	4
45	50mm Reducer	No	2
46	40mm Elbow	No	4
47	40mm Male/female 90 deg offtake	No	4
48	40mm T	No	6
49	50mm Elbow	No	2
50	50mm Male/female 90 deg offtake	No	4
51	50mm T	No	2
<u>TAPS, VALVES, ETC</u>			
<u>Brass</u>			
52	40mm Stopcock	No	2
53	50mm Stopcock	No	1
<u>Sundries</u>			
54	210 x 340mm Water meter box	No	4
Carried Forward			R
External/Civil Works - 28 Units Bill No.2 - Plumbing and Drainage			

**ACACIA PARK
DEMOLITION OF 113 ACCOMODATION STRUCTURES
CONSTRUCTION OF REPLACEMENT ACCOMODATION &
ASSOCIATED INFRASTRUCTURE**

Brought Forward			R
<u>IRRIGATION WATER SUPPLY (CPAP WORK GROUP 148)</u>			
<u>Class 3 LDPE type pipes</u>			
55	12mm Pipes laid in trenches (trenches elsewhere).	m	25
<u>Extra over Class 3 LDPE type pipes for "Compression Type" fittings</u>			
56	12mm Couplings	No	12
57	12mm Elbows	No	16
58	12mm T-Piece	No	8
59	End plug	No	8
<u>TAPS, VALVES, ETC</u>			
<u>Brass</u>			
60	12mm Brass nickle plated ball valve	No	1
<u>PVC</u>			
61	12mm PVC Threaded ball valve	No	2
<u>Sundries</u>			
62	210 x 340mm Water meter box	No	1
Carried Forward to Summary of Section No. 9			R
External/Civil Works - 28 Units			
Bill No.2 - Plumbing and Drainage			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 10 - SITE ELECTRICAL</u> <u>RETICULATION - 28 UNITS</u></p> <p><u>BILL NO.1 - SITE ELECTRICAL</u> <u>RETICULATION</u></p> <p><u>(CPAP WORK GROUP 160 and 162 UNLESS</u> <u>OTHERWISE STATED)</u></p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Supplementary Preambles</u></p> <p><u>Specifications, drawings, etc.:</u></p> <p>Tenderers are referred to the specification accompanying these bills of quantities for the electrical work, for the full descriptions of the following items which are to be read and priced in conjunction with the said specification</p>			
	<p style="text-align: right;">Carried Forward</p> <p>Site Electrical Reticulation - 28 Units Bill No.1 - Site Electrical Reticulation</p>		R	

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Brought Forward	R
<p><u>Distribution boards, etc:</u></p> <p>Rates for distribution boards etc are to include for busbars, jumpers, neutral bars, internal wiring and connections, circuit identification markers, control gear labels, circuit legend cards and working drawings</p> <p><u>Switches, socket outlets, etc:</u></p> <p>Rates for switches, socket outlets, etc are to include for screwing to outlet boxes, connecting up and cover plates</p> <p><u>Light fittings:</u></p> <p>Rates for light fittings are to include for hanging, fixing and connecting and for lamp holders and fluorescent tubes and lamps of the type and wattage described</p> <p><u>Liaison with Local Authority</u></p> <p>Liaise with the Local Authority with regard to compliance with the National Building Regulations, Local By-laws and any other Statutory Regulations.</p> <p><u>Concurrent with Building Work:</u></p> <p>The electrical work in this service shall be carried out concurrently with the building work. The electrical contractor shall liaise closely with the building contractor</p> <p><u>Handing over existing materials:</u></p> <p>Where certain materials or articles are described as to be handed over by the contractor to the Department's Representative or Representative/Agent such materials or articles shall be properly stored by the contractor until handing over thereof. The contractor must obtain an official receipt listing the materials or articles and dates of handover. If the contractor fails to submit the receipt when requested to do so it shall be deemed that the materials or articles are still in his possession and he will be held liable to the Department for the full replacement value thereof which amount will be deducted from any monies due to the contractor.</p>	
Carried Forward	R
<p>Site Electrical Reticulation - 28 Units</p> <p>Bill No.1 - Site Electrical Reticulation</p>	

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Brought Forward			R
<u>Low Voltage Cables Armoured</u>			
1	16 mm ² Cu x 2 core with 1mm ² Pilot wires	m	1,400
2	16 mm ² Cu x 2 core	m	550
3	70mm ² Al x 4 core	m	100
4	120mm ² Al x 4 core	m	360
5	120mm ² Al x 4 core	m	180
6	Terminations	No	1
<u>Distribution Kiosk</u>			
<u>Supply and install 12 Way Double door 3CR12 Steel Distribution Kiosk including all internal wiring, bus bars, circuit breakers, all labelling and accessories, with vermin proofing as specified. Kiosks to be pre-wired for split prepayment meter installation, meter installation by Others</u>			
7	12 Way double door 3CR12 Steel Kiosk with 10 x 63A QF-1(26)-C1 6kA Curve 1 Single Pole MCB's as per CoCT Specification	No	1
8	12 Way double door 3CR12 Steel Kiosk with 9 x 63A QF-1(26)-C1 6kA Curve 1 Single Pole MCB's as per CoCT Specification	No	2
9	Single-phase Prepaid billing meter complete 80A	No	28
10	User/keypad 80A	No	28
11	Labelling sum	No	1
<u>Streetlighting</u>			
<u>Comprises floodlighting, sundry builder's work, etc.</u>			
12	BEKAS [®] Star - 47W LED	No	1
13	BEKARay - 47W LED	No	1
Carried Forward			R
Site Electrical Reticulation - 28 Units Bill No.1 - Site Electrical Reticulation			

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Brought Forward			R
14	LUCCA Post Top - 45W-LED	No	11
15	6,3m Galvanised Steel pole	No	11
16	16mm² Al 2-Core	No	550
17	Terminations	No	1
18	Streetlighting control	No	1
19	Labelling sum	No	1
<u>Earthing & Bonding</u>			
20	Steel reinforced 1,8m copper earth spikes and brass coupling wiSteel reinforced 1,8m copper earth spikes and brass coupling with driving capth driving cap	No	12
21	70mm² BCE wiring	m	150
22	Termination of 70mm² on copper spike and earth bar	m	24
23	Earthing and Bonding of a unit or residential installation including all equipment to bond water pipes and the like in compliance with SANS 10142, the General Specification, the Code of Practice and the Local Supply Authorities as per the Statutory requirements IRO Wiring of Premises. Rate measured as per unit	No	28
24	2,5mm² BCE wiring	m	500
25	4mm² BCE wiring	m	100
Carried to Final Summary			R
Site Electrical Reticulation - 28 Units			
Bill No.1 - Site Electrical Reticulation			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 11 - LANDSCAPING AND PAVING - 28 UNITS</u></p> <p><u>BILL NO.1 - LANDSCAPING AND PAVING</u></p> <p><u>(CPAP WORK GROUP 104, 110,111, 112,114, 118 and 154 UNLESS OTHERWISE STATED)</u></p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Nature of ground</u></p> <p>The nature of the ground is unknown and the contractor is to make his own assessment and due allowance for same</p> <p><u>Subterranean water</u></p> <p>The nature of the ground is unknown and the contractor is to make his own assessment and due allowance for same</p>			
	<p style="text-align: right;">Carried Forward</p> <p>Landscaping and Paving - 28 Units Bill No.1 - Landscaping and Paving</p>		R	

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Brought Forward	R
<p><u>Carting away of excavated material</u></p> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p> <p><u>Working Space</u></p> <p>Working space for any work requiring formwork, brick linings, etc, has been determined by the following conditions and shall be measured where:</p> <ol style="list-style-type: none"> 1. The depth of the excavation does not exceed 1000mm and the distance from the finished face of the structure to the excavated face is less than 250mm for formwork or 600mm for brick linings and 2. The depth of the excavation exceeds 1000mm and the distance from the finished face of the structure to the excavated face is less than 600mm <p><u>Filling and layer work materials</u></p> <p>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</p> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series</p> <p><u>Testing of material and filling</u></p> <p>Descriptions of earth filling, compaction, etc shall be deemed to include for all necessary testing required in accordance with the SABS 1200 series</p>	
Carried Forward	R
<p>Landscaping and Paving - 28 Units</p> <p>Bill No.1 - Landscaping and Paving</p>	

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Brought Forward			R
<u>Precast concrete block road surfacing</u>			
Paving shall be laid in accordance with SABS 1200 MJ, SANS 1058 and the Concrete Masonry Association's specifications			
<u>SITE CLEARANCE (CPAP WORK GROUP 104)</u>			
<u>Site clearance</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m2	1,820
<u>FILLING, ETC</u>			
<u>G5 Earth filling from commercial sources supplied by the Contractor in accordance with SABS 1200 DM, compacted to 95% Mod AASHTO density</u>			
2	Sub-Base layers	m3	270
<u>G7 Earth filling from commercial sources supplied by the Contractor in accordance with SABS 1200 DM, compacted to 98% Mod AASHTO density</u>			
3	Over site to make up levels	m3	270
<u>Compaction of surfaces</u>			
4	Compaction of natural or excavated ground surface under parking areas etc, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density	m2	1,820
<u>Prescribed density tests on filling:</u>			
5	"Modified AASHTO Density" test	No	18
Carried Forward			R
Landscaping and Paving - 28 Units Bill No.1 - Landscaping and Paving			

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Brought Forward			R
<u>PAVING ETC (CPAP WORK GROUP 118)</u>			
<u>Allow the prime cost amount of R10,000 per thousand paving bricks (ten thousand rand) for the supply and delivery to site of paving of 50mm clay paving bricks laid on 50mm thick river sand bed</u>			
6	Clay paving laid with open joints with sand and cement mixture swept into joints, hosed down and pointed with slightly keyed joints including preparation of ground or filling in stretcher bond	m2	1,800
<u>PRECAST CONCRETE (CPAP WORK GROUP 112)</u>			
<u>Precast concrete kerbs finished smooth on exposed surfaces, bedded on a 50mm thick x 175mm wide layer of unreinforced concrete with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint and jointed in 3.1 cement mortar, including excavation, backfilling, etc</u>			
7	75 x 150mm High kerbs (E1/SANS 927 fig 11)	m	2,000
Carried Forward to Summary of Section No. 11			R
Landscaping and Paving - 28 Units			
Bill No.1 - Landscaping and Paving			

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Item No		Quantity	Rate	Amount
	<p><u>SECTION NO. 11 - LANDSCAPING AND PAVING - 28 UNITS</u></p> <p><u>BILL NO.2 - PLUMBING AND DRAINAGE</u></p> <p><u>(CPAP WORK GROUP 146 ,148 & 171 UNLESS OTHERWISE STATED)</u></p> <p>NOTE</p> <p>The use of trade names is an indication of a standard acceptable to the Project Manager. Any other equal alternative product / brand may be used with prior written approval of the Project Manager.</p> <p><u>Preambles</u></p> <p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p> <p><u>Wire gratings</u></p> <p>Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings</p>			
	<p style="text-align: right;">Carried Forward</p> <p>Landscaping and Paving - 28 Units Bill No.2 - Plumbing and Drainage</p>		R	

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Brought Forward	R
<p><u>Stormwater channels</u></p> <p>Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc, and disposal of surplus material on site</p> <p><u>Exposed concrete surfaces</u></p> <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> <p><u>Sealing of edges</u></p> <p>Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone</p> <p><u>Reducing fittings</u></p> <p>Where fittings have reducing ends or branches they are described as "reducing" and 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</p> <p><u>uPVC pipes and fittings</u></p> <p>Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings</p> <p>Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings</p> <p><u>uPVC pressure pipes and fittings</u></p> <p>Pipes of 50mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings</p> <p>Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints</p>	
Carried Forward	R
<p>Landscaping and Paving - 28 Units</p> <p>Bill No.2 - Plumbing and Drainage</p>	

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Brought Forward	R
<p><u>High density polyethylene (HDPE) pipes and fittings</u></p> <p>Pipes shall be type IV and of the class specified with "Plasson" or "Alprene" compression fittings</p> <p><u>"Polycop" polypropylene pipes</u></p> <p>Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or where so described "Polylock" compression fittings</p> <p>Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions</p> <p><u>Copper pipes</u></p> <p>Pipes shall be hard drawn and half-hard "Maksal" pipes of the class described. 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. Capillary solder fittings shall comply with ISO 2016</p> <p>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</p> <p><u>Fixing of pipes</u></p> <p>Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc, casting in, building in or suspending not exceeding 1m below suspension level</p>	
Carried Forward	R
<p>Landscaping and Paving - 28 Units</p> <p>Bill No.2 - Plumbing and Drainage</p>	

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Brought Forward	R
<p><u>Stainless steel basins, sinks, wash troughs, urinals, etc</u></p> <p>Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0)</p> <p>Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8)</p> <p>Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8)</p> <p>Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable</p> <p><u>Paper wrapping to pipes</u></p> <p>Pipes chased into brickwork must be wrapped with two layers of stout brown paper tied with wire. Rates are to include for wrapping around joints and fittings</p> <p><u>Laying, backfilling, bedding, etc of pipes</u></p> <p>Pipes shall be laid and bedded in accordance with manufacturers' instructions and trenches shall be carefully backfilled</p> <p><u>Filling and bedding material</u></p> <p>Selected Fill Material: Selected material shall be material that has a P.I not greater than 6, is free from vegetation and from lumps and stones of diameter > 30mm. This material shall be used for the selected fill blanket</p> <p>Selected Granular Material: Selected granular material shall be of a granular, non-cohesive nature that is singularly graded between .6mm and 19mm, free draining, has a compact ability factor not exceeding .4 or such similar value as is laid down in project specification. For PVC and uPVC the factor is not to exceed the following; 1) 0.1 - Material suitable for all ground conditions 2) 0.3 - Material suitable provided extra care is taken during compaction operation</p>	
Carried Forward	R
<p>Landscaping and Paving - 28 Units Bill No.2 - Plumbing and Drainage</p>	

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Brought Forward				R
<p>Joints:</p> <p>To ensure that each pipe will be fully supported throughout the length of its barrel on the bedding cradle, joint pockets/ holes shall be formed in the bedding cradle for pipe sockets</p> <p>All work below ground shall be carried out in accordance with SANS 1200DB, SANS 1200LB, SANS 1200LD and SANS 1200LE</p> <p><u>General</u></p> <p>Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc and to steel pipes (adaptors for connections to copper pipes, etc are given separately)</p> <p>Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured)</p> <p><u>EARTHWORKS (STORMWATER, SUBSOIL DRAINAGE, STORMWATER DRAINAGE, SLEEVES FOR ELECTRICAL AND TELEPHONE CABLES ETC, SOIL DRAINAGE AND WATER SUPPLIES) (CPAP WORK GROUP 146)</u></p> <p><u>Excavation in earth</u></p>				
1	Excavation in earth not exceeding 1m deep for pipe or cable trenches or chambers including risk of collapse of excavations	m3	360	
2	Excavation in earth exceeding 1m but not exceeding 2m deep for pipe or cable trenches or chambers including risk of collapse of excavations	m3	720	
3	Extra over excavation in earth for pipe and cable trenches or chambers for excavation in soft rock	m3	108	
4	Extra over excavation in earth for pipe and cable trenches or chambers for excavation in hard rock	m3	54	
Carried Forward				R
<p>Landscaping and Paving - 28 Units</p> <p>Bill No.2 - Plumbing and Drainage</p>				

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Brought Forward			R
5	Extra over excavation for pipe and cable trenches or chambers for carting away surplus material to a dumping site located by the contractor (This rate 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, and spoiled at a site located by the contractor not exceeding 10km in one direction from the site. Rate should not allow for the spoiling costs paid at the dump site and this will be measured as an separate item in each work package)	m3	471
6	Extra over carting away of surplus material further than 10km in one direction from the site	m3	314
7	Backfilling to pipe or cable trenches or chambers	m3	216
8	Backfilling to pipe or cable trenches compacted or chambers to 95% Mod AASHTO density	m3	324
9	Selected granular filling in bedding under and filling around pipes	m3	86
10	Sand filling in bedding under and filling around pipes	m3	159
<u>CONCRETE (STORMWATER, SUBSOIL DRAINAGE, STORMWATER DRAINAGE, SLEEVES FOR ELECTRICAL AND TELEPHONE CABLES ETC, SOIL DRAINAGE AND WATER SUPPLIES) (CPAP WORK GROUP 146)</u>			
11	15MPa/19mm Concrete in encasing to not exceeding 110mm diameter horizontal pipe of a minimum thickness of 150mm around pipe, including all necessary casing	m	400
12	15MPa/19mm Concrete in encasing to not exceeding 110mm diameter horizontal bend or junction of a minimum thickness of 150mm around fitting, including all necessary casing	No	275
13	15MPa/19mm Concrete in thrust block (approximately 0,06 cubic metres) at bends, etc., including casing	No	165
Carried Forward			R
Landscaping and Paving - 28 Units Bill No.2 - Plumbing and Drainage			

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	Brought Forward			R	
	<u>SLEEVES FOR ELECTRICAL AND TELEPHONE CABLES ETC (CPAP WORK GROUP 171)</u>				
	<u>Class 6 PVC-U pipes</u>				
14	50mm Pipes laid in trenches (trenches elsewhere)	m	1,000		
15	110mm, ditto	m	1,000		
	<u>Extra over Class 6 PVC-U pipes for fittings</u>				
16	50mm Long radius bend	No	22		
17	100mm Ditto	No	28		
	<u>Draw wires</u>				
18	1,6mm Galvanised steel draw wires in pipes	m	2,000		
	<u>Precast concrete circular inspection chambers including precast concrete cover slabs (cast iron covers and frames elsewhere) and channels in benching:</u>				
19	1000mm Diameter inspection chamber not exceeding 1m deep internally	No	4		
	<u>Gratings, covers, etc:</u>				
20	Type 2A 635mm diameter cast iron manhole cover and frame	No	4		
21	Lifting-key for manhole cover (handed to Employer)	No	4		
	<u>Provisional Sum for Borehole</u>				
22	Provide the sum of R350,000 (Three Hundred and Fifty Thousand Rands) for 1 No. borehole servicing all 7 blocks, i.e. 28 units.		PS		350,000.00
23	Contractors Markup			%	
	Carried Forward to Summary of Section No. 11				
	Landscaping and Paving - 28 Units				
	Bill No.2 - Plumbing and Drainage				

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 12 - 18TH AVENUE SEWER REPAIRS</u>			
	<u>BILL NO.1 - 18TH AVENUE SEWER REPAIRS</u>			
	<u>(CPAP WORK GROUP 104,112,136 & 154 UNLESS OTHERWISE STATED)</u>			
	<u>Preambles</u>			
	<p>The "Construction Works: Specifications: General Specification (PW371-A) Edition 2.1" and "Construction Works: Specifications: Particular Specification (PW371-B) Edition 2.2" obtainable on the Public Works Website: http://www.publicworks.gov.za/ under "Forms & Documents; Consultants Guidelines"; Item 2.2.1 and 2.2.2 or from the Departmental Project Manager/Leader should be read in support and extend the abbreviated bills of quantities descriptions by inter alia referring to SANS construction standards.</p> <p>Users are to ensure that the abbreviated descriptions when read in conjunction with the applicable measuring system, represents the full description by extending the abbreviated bills of quantities descriptions and/or by inserting appropriate preambles or specifications.</p> <p>The Standard Preambles and the Notes in the various trade bills are to apply equally to this section.</p>			
	<u>SITE CLEARANCE (CPAP WORK GROUP 104)</u>			
	<u>Site clearance</u>			
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc and trees not exceeding 200mm girth	m2	900	
	<u>Taking out and removing, grubbing up roots, filling in holes and compacting to 95% Mod AASHTO density</u>			
2	Tree stump not exceeding 1m high, exceeding 200mm and not exceeding 500mm girth	No	10	
	Carried Forward			R
	18th Avenue Sewer Repairs Bill No.1 - 18th Avenue Sewer Repairs			

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	Brought Forward			R
3	Tree stump not exceeding 1m high, exceeding 500mm and not exceeding 1000mm girth	No	30	
4	Tree stump exceeding 1m high, exceeding 2000mm and not exceeding 2500mm girth	No	30	
	<u>Excavation in earth</u>			
5	Trenches	m3	1,600	
6	Holes	m3	66	
	<u>Extra over all excavations for carting away</u>			
7	Surplus material from bulk excavations and/or stock piles on site to a dumping site located by the contractor (This rate 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, and spoiled at a site located by the contractor not exceeding 10km in one direction from the site.	m3	112	
8	Extra over carting away of surplus material further than 10km in one direction from the site	m3	80	
	<u>Risk of collapse of excavations</u>			
9	Sides of trench and hole excavations exceeding 1,5m deep	m2	500	
	<u>Keeping excavations free of water</u>			
10	Keeping excavations free of all water other than subterranean water			SUM
	<u>FILLING ETC</u>			
	<u>Selected earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density</u>			
11	Backfilling to trenches, holes, etc	m3	1,554	
12	Selected granular material	m3	140	
	Carried Forward			R
	18th Avenue Sewer Repairs Bill No.1 - 18th Avenue Sewer Repairs			

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Brought Forward			R
<u>TESTS</u>			
<u>Prescribed tests to determine degree of compaction</u>			
13	Dynamic Cone Penetration Test	No	12
<u>ROOT CONTROL</u>			
<u>Biobarrier Root Control</u>			
14	Root Control Fabric 750mm deep to be layed along trench area.Prune tree and shrub roots, ensuring it is between the area to be protected and all roots, secure with the landscape pins, backfill the trench and tamp it to ensure there are no gaps in the soil.	m	400
<u>PIPEWORK</u>			
<u>Heavy duty (Class 34) socketed uPVC sewer pipes</u>			
15	315mm Pipes laid in trenches	m	200
16	Cut into existing stoneware sewer pipe exceeding 110 and not exceeding 160mm diameter to remove damaged portion and reinstate, including testing	No	1
17	Cutting into side of existing inspection chamber for and connecting pipe, including inserting pipe channel junction and making good concrete benching	No	2
<u>INSPECTION CHAMBERS</u>			
18	20MPa/19mm unreinforced concrete in bottoms	m3	1
19	20MPa/19mm reinforced concrete in cover slab	m3	2
20	Average 50mm thick unreinforced concrete in benching bottom of chamber, dished down to channels and finished smooth with cement plaster	m2	5
21	Precast concrete circular manhole rings 1000mm diameter of varying heights to suit depth of each manhole and placed in position	m	21
22	One brick walls, in NFX bricks (14 MPa nominal compressive strength) in class II mortar	m2	5
Carried Forward			R
18th Avenue Sewer Repairs Bill No.1 - 18th Avenue Sewer Repairs			

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	Brought Forward			R
23	Plaster on brick walls	m2	5	
	<u>"4EVR or similar" Polypropylene steps</u>			
24	for Manholes	No	72	
	<u>Pumps</u>			
25	Provision of sludge pump and bypass pipes with maximum length of 75m with 20 litre/second capacity to bypass existing sewers during repairs	No	2	
26	Operate bypass pump during repairs	DAY	88	
	<u>Polymer Concrete Manhole covers and frames</u>			
27	450 x 450mm HD	No	5	
	<u>Scheduled Reinforcement Items</u>			
28	High Tensile Steel bars in the following Y10 bars	t	0.20	
29	Y20 bars	t	0.20	
	<u>Joints</u>			
30	Polyurethane Joint Sealer 10mm thick openings between precast slabs to be filled with an approved polyurethane sealer	m	20	
31	Seal around pipe with bituminous roofing felt type 4D and bitumen filler	m	6	
	Carried to Final Summary			R
	18th Avenue Sewer Repairs			
	Bill No.1 - 18th Avenue Sewer Repairs			

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 13</u>			
	<u>BILL NO.2</u>			
	<u>PROFESSIONAL SERVICES: QUANTITY SURVEYING</u>			
	<u>Tenderers are advised to consult the BOARD NOTICE 741 OF 2025 of the South African Council for the Quantity Surveying Profession, Amendment of Guidelines Tariff of Professional Fees in respect of services rendered by persons registered in terms of the Quantity Surveing Act 2000 (Act No.49 of 2000)</u>			
1	Stage 2 - Review of existing information	Item		
2	Stage 3 - Detail design development	Item		
3	Stage 4 - Documentation and procurement	Item		
4	Stage 5 - Construction	Item		
5	Stage 6 - Close-out	Item		
6	SACQSP Registered Professional Principal (rate per hour only)	Hrs		Rate Only
7	SACQSP Registered Professional (rate per hour only)	Hrs		Rate Only
8	SACQSP Candidate (rate per hour only)	Hrs		Rate Only
	Carried Forward to Summary of Section No. 13			R
	Professional Fees Bill No.2 - Quantity Surveyor			

Item No	Quantity	Rate	Amount
<u>SECTION NO. 13</u>			
<u>BILL NO.3</u>			
<u>PROFESSIONAL SERVICES: CIVIL ENGINEER</u>			
<u>Tenderers are advised to consult the BOARD NOTICE 22 OF 2021 of the Engineering Council of South Africa. The Engineering Council of South Africa has, under Section 34(2) of the Engineering Profession Act. 2000 (Act No. 46 of 2000) determined the guideline scope of services and tariff of fees in the Schedule.</u>			
1	Stage 2 - Review of existing information	Item	
2	Stage 3 - Detail design development	Item	
3	Stage 4 - Documentation and procurement	Item	
4	Stage 5 - Construction	Item	
5	Stage 6 - Close-out	Item	
6	ECSA Registered Professional Principal (rate per hour only)	Hrs	Rate Only
7	ECSA Registered Professional (rate per hour only)	Hrs	Rate Only
8	ECSA Registered Technician (rate per hour only)	Hrs	Rate Only
Carried Forward to Summary of Section No. 13			R
Professional Fees			
Bill No.3 - Civil Engineer			

Item No		Quantity	Rate	Amount
<u>SECTION NO. 13</u>				
<u>BILL NO.4</u>				
<u>PROFESSIONAL SERVICES: STRUCTURAL ENGINEER</u>				
<u>Tenderers are advised to consult the BOARD NOTICE 22 OF 2021 of the Engineering Council of South Africa. The Engineering Council of South Africa has, under Section 34(2) of the Engineering Profession Act. 2000 (Act No. 46 of 2000) determined the guideline scope of services and tariff of fees in the Schedule.</u>				
1	Stage 2 - Review of existing information	Item		
2	Stage 3 - Detail design development	Item		
3	Stage 4 - Documentation and procurement	Item		
4	Stage 5 - Construction	Item		
5	Stage 6 - Close-out	Item		
6	ECSA Registered Professional Principal (rate per hour only)	Hrs		Rate Only
7	ECSA Registered Professional (rate per hour only)	Hrs		Rate Only
8	ECSA Registered Technician (rate per hour only)	Hrs		Rate Only
Carried Forward to Summary of Section No. 13				R
Professional Fees				
Bill No.4 - Structural Engineer				

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Item No		Quantity	Rate	Amount
<u>SECTION NO. 13</u>				
<u>BILL NO.5</u>				
<u>PROFESSIONAL SERVICES: ELECTRICAL ENGINEER</u>				
<u>Tenderers are advised to consult the BOARD NOTICE 22 OF 2021 of the Engineering Council of South Africa. The Engineering Council of South Africa has, under Section 34(2) of the Engineering Profession Act. 2000 (Act No. 46 of 2000) determined the guideline scope of services and tariff of fees in the Schedule.</u>				
1	Stage 2 - Review of existing information	Item		
2	Stage 3 - Detail design development	Item		
3	Stage 4 - Documentation and procurement	Item		
4	Stage 5 - Construction	Item		
5	Stage 6 - Close-out	Item		
6	ECSA Registered Professional Principal (rate per hour only)	Hrs		Rate Only
7	ECSA Registered Professional (rate per hour only)	Hrs		Rate Only
8	ECSA Registered Technician (rate per hour only)	Hrs		Rate Only
Carried Forward to Summary of Section No. 13				R
Professional Fees				
Bill No.5 - Electrical Engineer				

Item No		Quantity	Rate	Amount
<u>SECTION NO. 13</u>				
<u>BILL NO.6</u>				
<u>PROFESSIONAL SERVICES: MECHANICAL ENGINEER</u>				
<u>Tenderers are advised to consult the BOARD NOTICE 22 OF 2021 of the Engineering Council of South Africa. The Engineering Council of South Africa has, under Section 34(2) of the Engineering Profession Act. 2000 (Act No. 46 of 2000) determined the guideline scope of services and tariff of fees in the Schedule.</u>				
1	Stage 2 - Review of existing information	Item		
2	Stage 3 - Detail design development	Item		
3	Stage 4 - Documentation and procurement	Item		
4	Stage 5 - Construction	Item		
5	Stage 6 - Close-out	Item		
6	ECSA Registered Professional Principal (rate per hour only)	Hrs		Rate Only
7	ECSA Registered Professional (rate per hour only)	Hrs		Rate Only
8	ECSA Registered Technician (rate per hour only)	Hrs		Rate Only
Carried Forward to Summary of Section No. 13				R
Professional Fees				
Bill No.6 - Mechanical Engineer				

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Item No		Quantity	Rate	Amount
	<u>SECTION NO. 13</u>			
	<u>BILL NO.7</u>			
	<u>PROFESSIONAL SERVICES: LANDSCAPE ARCHITECT</u>			
	<p><u>Tenderers are advised to consult the notice from South African Council for the Landscape Architectural Profession, Section 12 (1) of the Landscape Architectural Profession Act, (Act No. 45 of 2000) ("the Act")</u></p> <p><u>For the purposes of determining the professional fee applicable to the landscape scope of works, the Value of Works shall be deemed to be R5,000,000.00 (Five Million Rands). This value shall serve as the basis for all fee calculations, assessments, and any related cost-based evaluations pertaining to the landscape professionals appointment</u></p>			
1	Stage 2 - Review of existing information	Item		
2	Stage 3 - Detail design development	Item		
3	Stage 4.1 - Documentation and procurement	Item		
4	Stage 4.2 - Documentation and procurement	Item		
5	Stage 5 - Construction	Item		
6	Stage 6 - Close-out	Item		
7	SACLAP Registered Professional Principal (rate per hour only)	Hrs		Rate Only
8	SACLAP Registered Professional (rate per hour only)	Hrs		Rate Only
9	SACLAP Registered Technician (rate per hour only)	Hrs		Rate Only
	Carried Forward to Summary of Section No. 13			
	Professional Fees			
	Bill No.7 - Landscape Architect			
			R	

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