

C2 PRICING DATA

PG-02.1 (EC) PRICING ASSUMPTIONS – GCC 3rd Edition (2015)

Project title:	<i>PAFURI LAND PORT OF ENTRY: SUPPLY AND INSTALLATION OF SOLAR PANELS AND WASTE WATER FACILITY</i>		
Tender / Quotation no:	H23/022AI	Reference no:	H23/022AI

C2.1 Pricing Assumptions

C2.1.1 GENERAL

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents, which include the Conditions of Tender, Conditions of Contract, the Specifications (including the Project Specification) and the Drawings.

C2.1.2 DESCRIPTION OF ITEMS IN THE SCHEDULE

The Bill of Quantities has been drawn up generally in accordance with Civil Engineering Quantities 1990 issued by the SA Institution of Civil Engineers.

The short descriptions of the items in the Bill of Quantities are for identification purposes only and the measurement and payment clause of the Standardized Specifications and the Particular Specifications, read together with the relevant clauses of the Project Specification and directives on the drawings, set out what ancillary or associated work and activities are included in the rates for the operations specified.

C2.1.3 QUANTITIES REFLECTED IN THE SCHEDULE

The quantities given in the Bill of Quantities are estimates only, and subject to remeasuring during the execution of the work. The Contractor shall obtain the Engineer's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities and in accordance with the General and Special Conditions of Contract, the Specifications and Project Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.

The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

C2.1.4 PROVISIONAL SUMS

Where Provisional sums or Prime Cost sums are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with Clause 45 of the General Conditions of Contract 2004. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Employer before closure of tenders. Unauthorized changes made by the Tenderer to provisional items in the Bill of Quantities, or to the provisional percentages and sums in the Summary of the Bill of Quantities will lead to the disqualification of the Tenderer.

C2.1.5 PRICING OF THE BILL OF QUANTITIES

The **bills of quantities / lump sum document** forms part of and must be read and priced in conjunction with all the other documents forming part of the **contract documents**, the Standard Conditions of Tender, Conditions of Contract, Specifications, Drawings and all other relevant documentation.

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to be paid by the Employer for the work described under the several items, and shall include full compensation for all cost and expenses that may be required in and for the completion and maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based.

Each item shall be priced and extended to the “Total” column by the Tenderer, with the exception of the items for which only rates are required, or items which already have Prime Cost or Provisional Sums affixed thereto. If the Contractor omits to price any items in the Bill of Quantities, then these items will be considered to have a nil rate or price.

The Tenderer is required to check the Bills of Quantities and the numbers of the pages and should any be found to be missing or in duplicate, or should any of the typing be indistinct, or any doubt of obscurity arise as to the meaning of any description or particulars of any item, or if this Tender Enquiry contains any obvious errors, then the Tenderer must immediately inform the Principal Agent and have them rectified or explained in writing as the case may be. No liability whatsoever will be admitted by reason of the Contractor having failed to comply with the foregoing instruction.

No alterations, erasures, omissions or additions is to be made in the text and/or conditions of these Bills of Quantities. Should any such alterations, amendments, note/s or addition be made, the same will not be recognized, but reading of these Bills of Quantities as originally prepared by the Quantity Surveyor will be adhered to.

The contractor is cautioned that the use of any quantities appearing in these Bills of Quantities for the purpose of ordering material, it is done at own risk and no liability whatsoever will be admitted by the Employer or Quantity Surveyor for the correctness of such Quantities. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

The prices and rates to be inserted by the Tenderer in the Bills of Quantities shall be the full inclusive prices to be paid by the Employer for the work described. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Market related prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out. The Employer reserves the right to balance the Bill rates where deemed necessary within the Tendered Amount.

A price or rate is to be entered against each item in the Bills of Quantities, whether the quantities are stated or not. An item against which no rate is/are entered, or if anything other than a rate or a nil rate (for example, a zero, a dash or the word “included” or abbreviations thereof) is entered against an item, it will also be regarded as a nil rate having been entered against that item, i.e. that there is no charge for that item. The Tenderer may be requested to clarify nil rates, or items regarded as having nil rates; and the Employer may also perform a risk analysis with regard to the reasonableness of such rates.

Should the full intent and meaning of any description not be clear, the bidder shall, before submission of his tender, call for a written directive from the principal agent, failing which it shall be assumed that the contractor has allowed in his pricing for materials and workmanship in terms of National Best Practice.

All items for which terminology such as “inclusive” or “not applicable” have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

The Tenderer shall fill in rates for all items where the words “rate only” appear in the “Total” column. “Rate Only” items have been included where:

- (a) variations of specified components in the make-up of a pay item may be expected; and
- (b) no work under the item is foreseen at tender stage but the possibility that such work may be required is not excluded.

For ‘Rate Only’ items no quantities are given in the ‘Quantity’ column but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall however note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the ‘PW 371’ and the principles contained in the latest version of the SANS 1200 in South Africa. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or specifications. However, should the full intent and meaning of any description not be clear, the bidder shall, before submission of his tender, call for a written directive from the principal agent, failing which it shall be assumed that the contractor has allowed in his pricing for materials and workmanship in terms of National Best Practice.

The price quoted against each item of this Bills of Quantities shall cover the full inclusive cost of the complete work to which it refers, as described in the Conditions of Contract and Specifications and as shown on the Drawings and shall allow for labour, material, transporting, loading, storage, supervision, commissioning, wastage, as well as the builders profit and attendance.

The Tenderer must ensure that he fully completes all columns of the Bill of Quantities including the Final Summary. The fully priced bill of quantities must be submitted with the tender or The Final Summary and the Section Summary pages **MUST** be returned with the tender document as indicated the PA-03 Notice and Invitation to Tender / PA-04 Notice and Invitation for quotation.

The tenderers are to ensure that they have read and understood the project specifications included in C3: Scope of Work. All the information provided in the Scope of Works form part of the work and must be included in the rates.

‘The Contractor shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself before submitting his tender (as far as is practicable) as to:

- (a) the form and nature of the Site and its surroundings, including subsurface conditions,
- (b) the hydrological and climatic conditions,
- (c) the extent and nature of work and materials necessary for the execution and completion of the Works,
- (d) the means of access to the Site and the accommodation he may require

and, in general, shall be deemed to have obtained all information (as far as is practicable) as to risks, contingencies and all other circumstances which may influence or affect his Tender’

C2.1.6 VALUE ADDED TAX

The **contract sum** must include for Value Added Tax (VAT). All rates, provisional sums, etc. in the **bills of quantities / lump sum document** shall be in Rands and cents and shall include all levies and taxes (other than VAT). VAT will be added in the summary of the Bill of Quantities. The rates must however be net (exclusive of VAT) with VAT calculated and added to the total value thereof in the Final Summary.

All rates and amounts quoted in the Bill of Quantities

C2.1.7 CORRECTION OF ENTRIES

Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialled by the Tenderer.

C2.1.8 ARITHMETICAL ERRORS

Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication of addition, will be corrected by the Engineer at the tender evaluation stage, as set out in the Tender Data.

C2.1.9 CONTRACT DOCUMENTS

The Tenderers are advised to examine the bills of quantities, drawings and specifications including all other contract documents and make themselves thoroughly acquainted with the nature and requirements of the work, as no claim for extra payment in this regard will be entertained. Should any parts of the drawings not be clearly intelligible to the Tender, he must, before submitting his tender, obtain clarification from the Principal Agent.

C2.1.10 UNITS OF MEASUREMENT

The units of measurement described in the Bill of Quantities are metric units for which the standard international abbreviations are used. Non-standard abbreviations which may appear in the Bill of Quantities are as follows:

No.	=	Number
%	=	Percent
Sum	=	Lump sum
PCsum	=	Prime cost sum
Prov sum	=	Provisional sum
m ³ .km	=	Cubic metre - kilometre
Km-pas	=	kilometre - pass
m ² .pass	=	square metre – pass

C2.1.11 TRADE NAMES

Tenderers attention is drawn to the fact that wherever trade names or references to any catalogue have been made in these Bills of Quantities, it is purely to establish a standard for the required material. If use is made of any other equally approved material in lieu of the prescribed trade name or catalogue, the necessary price adjustments will be made.

C2.1.12 CONTRACT DOCUMENTS

The Tenderers are advised to examine the bills of quantities, drawings and specifications including all other contract documents and make themselves thoroughly acquainted with the nature and requirements of the work, as no claim for extra payment in this regard will be entertained. Should any parts of the drawings not be clearly intelligible to the Tender, he must, before submitting his tender, obtain clarification from the Principal Agent.

C2.1.13 PAYMENTS

Interim valuations and payments will be prepared on a monthly basis, all in terms of the conditions of contract.

The contractor is to note that no payment will be made for materials stored off site and in the case of materials being stored on site, payment will only be made for such materials on condition that they have not been delivered to the site prematurely, a tax invoice and proof of payment (ownership) is submitted by the Contractor.

C2.1.14 ACCOMMODATION ON SITE

It is imperative to note that no living quarters for construction workers on site will not be permitted for the full duration of the contract unless otherwise stated in the contract data or permission be granted by the Employer.

C2.1.15 LOCAL MATERIAL UTILISATION REPORT (LOCAL CONTENT)

Submission of Local Material Utilisation Reports is *"not applicable"* to this project.

Bidders to note that materials procured for the works should be from South African manufactures and suppliers. Imported materials shall only be considered under exceptional circumstances, based on compelling technical justifications, and subject to the approval by the NDPWI.

The contractor shall be responsible for record keeping, documenting and submission of monthly local material utilization report with supporting documentation to the Employer's representative within 7 working days of the beginning of the successive month, indicating the percentage targets achieved in terms of DTI&C designated industry/sector/sub-sector schedule as per the PA36 and Annexures C attached to the tender document. The final percentage achievement to be reconciled upon completion of the project and form part of the final account. Allowance must be made for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.16 CONTRACT PARTICIPATION GOALS

The contractor shall achieve in the performance of this contract the following Contract Participation Goals (CPGs) as indicated below:

Provision for pricing of compliance with the achieving the CPGs is made in the Contract Participation Goal Section of the Bills of Quantities and it is explicitly pointed out that all requirements in respect of the aforementioned are deemed to be priced thereunder and no additional claims in this regard shall be entertained

Monthly progressive reports to be submitted to the Employer's representative indicating the percentage targets achieved which must be reconciled upon completion of the project and to form part of the final account.

C2.1.16.1 MINIMUM TARGETED LOCAL BUILDING MATERIAL MANUFACTURERS CONTRACT PARTICIPATION GOAL

The Minimum Targeted Local Building Material Manufacturers CPG is "not applicable" to this project.

Provision is made within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Local Building Material Manufacturers CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.1. Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.16.2 MINIMUM TARGETED LOCAL BUILDING MATERIAL SUPPLIERS CONTRACT PARTICIPATION GOAL

The Minimum Targeted Local Building Material Suppliers CPG is "not applicable" to this project.

Provision is made within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Local Building Material Suppliers CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.2. Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.16.3 MINIMUM TARGETED LOCAL LABOUR CONTRACT PARTICIPATION GOAL

The Minimum Targeted Local Labour Skills Development CPG is "not applicable" to this project.

Provision is made within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Local Labour CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.3. T Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for

submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.16.4 MINIMUM TARGETED ENTERPRISE DEVELOPMENT: CONTRACT PARTICIPATION GOALS (CPG)

The Minimum Targeted Enterprise Development Contract Participation Goal is *"not applicable"* to this project.

A provisional amount has been allowed for within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Enterprise Development CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.4. The provisional amount allowed is for the appointment of training coordinator, mentor, training service providers and training of the beneficiary enterprises. The provisional amount will be adjusted in accordance with the actual Contract Amount (Awarded tender amount excluding allowance, provisional amounts and VAT) of the awarded bid.

Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

The contractor shall complete a separate bill of quantities upon the award of the project and identification of the respective beneficiaries and the appointment of the training coordinator, mentor, training service providers of which the cost will be offset against the provisional amount allowed in the Bills of Quantities.

C2.1.16.5 MINIMUM TARGETED TARGETED CONTRACT SKILLS DEVELOPMENT GOALS (CSDG)

The Minimum Targeted Contract Skills Development CPG is *"not applicable"* to this project.

A provisional amount has been allowed for within the Contract Participation Goal section in the Bill of Quantities for the Minimum Targeted Skills Development CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.5. The provisional amount allowed is for:

- 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

The provisional amount will be adjusted in accordance with the actual Contract Amount (Awarded tender amount excluding allowance, provisional amounts and VAT) of the awarded bid.

Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

The contractor shall complete a separate bill of quantities upon the award of the project and identification of the respective beneficiaries. The CPG value to be achieved will be based on the actual contract amount which will be offset against the provisional amount allowed for within the Contract Participation Goal section in the Bill of Quantities.

Payment

The contractor shall upon the appointment of beneficiaries, provide a breakdown of all the associated costs. The contractor shall provide a payment schedule as to how the CPG costs will be claimed against for inclusion in the monthly payment certificates.

(a) Payment to the contractor to accommodate Part/Full Occupational qualification and Trade qualifications:

Should the contractor select Part/Full Occupational qualification and Trade qualifications learners, then the employer shall make provision for payment to the contractor as indicated in Table 3 of the Standard.

The contract skills participation goal, expressed in Rand, shall not be less than the contract amount multiplied by a percentage (%) factor given in Table 2 in the Standard for the applicable class of construction works. Should the contractor select Part/Full Occupational qualification and Trade qualifications learners, then the employer shall make provision for payment to the contractor as indicated in Table 3 of the Standard.

Table 1: Contracting skills development goals for different classes of engineering and construction works contracts

Source: cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No 48491 Government Gazette, 23 April 2023 (Table 2, Page 7)

Class of construction works as identified in terms of Regulation 25 (3) of the Construction Industry Regulations 2004		Construction skills development goal (CSDG) (%)
Designation	Description	
CE	Civil Engineering	0.25
CE and GB	Civil engineering and General Building	0.375
EE	Electrical Engineering works (buildings)	0.25
EP	Electrical Engineering works (infrastructure)	0.25
GB	General Building	0.5
ME	Mechanical Engineering works	0.25
SB	Specialist	0.25

No provision for an additional payment item for the payment of the supervisor and/or mentors for the provision of training as provided for in the Contract Participation Goal section in the Bill of Quantities for the training of part/full time occupational learners and/or trade qualification learners. The associated cost is deemed to be included in general supervision on site.

The contractor shall complete a separate bill of quantities upon award, indicating the type and number of beneficiaries as well as the associated Notional Cost of Training to be provided, on which payment will be based.

(b) Payment to the contractor to accommodate Work Integrated Learners and Candidates for professional registration:

Should the contractor select Work Integrated Learners and/or Candidates for professional registration, then the employer shall make provision for payment to the contractor as indicated in Table 3 of the Standard.

Provisional amounts have been included in the Contract Participation Goal section in the Bill of Quantities for the training of Work Integrated Learners and Candidates for professional registration. The contractor shall price his Profit and Attendance (all inclusive of associated costs to the contractor for implementation and reporting), based on the provisional amount in the Contract Participation Goal section in the Bill of Quantities.

The contractor shall complete a separate bill of quantities upon award, indicating the type and number of beneficiaries as well as the associated Notional Cost of Training to be provided, on which payment will be based.

The CPG value to be achieved will be based on the contract amount as defined by the Standard, which will be offset against the provisional amount allowed for within the Contract Participation Goal section in the Bill of Quantities.

The contractor shall apportion the cost of accommodating work integrated learners (P1 and P2 learners) and candidates for professional registration by using Table 3 in the Standard and this cost will be used to determine the Rand value and will be used in determining the contract participation goal in the Bills of Quantities.

Table 3: The notional cost of providing training opportunities per quarter

Source: cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No 48491 Government Gazette, 23 April 2023 (table 3, Page 9)

Type of Training Opportunity	Provision for stipends (Unemployed learners only)	Provisions for mentorship	Provisions for additional costs*	Total costs	
				Unemployed learners	Employed learners
Method 1					
Occupational qualification	R7 000	R0	R9 000	R16 000	R9 000
Method 2					
TVET College graduates	R14 000	R0	R9 000	R23 000	N/A
Apprenticeship	R14 000	R0	R12 000	R26 000	R12 000
Method 3					
P1 and P2 learners	R24 000	R20 000	R4 500	R48 500	N/A
Method 4					
Candidates with a 3 year diploma	R37 000	R20 000	R4 500	R61 500	R20 000
Candidates with 4 year qualification	R47 000	R20 000	R4 500	R71 500	R20 000

Note: The notional cost of providing training opportunities will increase by CPI on an annual basis based on April CPI. Should the rates increase after bid award or during construction the rates will be adjusted as a provisional item.

Example: Training Target Calculation for a R65,7m GB contract

Contract amount	R65 700 000
Contract duration	12 Months
CSDG	0,50%
Minimum CSDG target	0,50% x R65 700 000 = R328 500 (Minimum requirement)

Skills Types	Number of learner	Notional Cost / Learner	Notional cost/learner/year	Total Notional Cost over 12 months Contract
Method 2: Workplace learning	1	R23 000	R92 000	R92 000
Method 3: Candidacy for an unemployed learner with	1	R61 500	R246 000	R246 000
Total	2			R338 000

C2.1.16.6 NATIONAL YOUTH SERVICE TRAINING AND DEVELOPMENT PROGRAMME

The National Youth Service Training and Development Programme is *insert "applicable" or "not applicable"* to this project.

The programme shall be implemented in terms of the Implementation of the National Youth Service Programme under the Expanded Public Works (EPWP) and shall be priced in the CPG section of the Bills of Quantities.

Provision has been made within the Contract Participation Goal section in the Bill of Quantities for the National Youth Service Training and Development Programme CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.6.

Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.1.16.7 LABOUR-INTENSIVE WORKS

Labour Intensive Works is *"not applicable"* to this project.

Where labour intensive work is specified in the Bill of Quantities and indicated by "LI" the contractor must price for and include in rates. Contractors are expected to use their initiative to identify additional activities that can be done labour-intensively to comply with the set minimum labour intensity target. Provision has been made within the Contract Participation Goal section in the Bill of Quantities for the monthly reporting illustrating the value of the works executed under Labour Intensive Works CPG in the execution of this project as described in PG-01.1 (EC) SCOPE OF WORKS C3.7.7 and any other supplementary specifications.

Prescribed Profit and Attendance percentages have been stipulated, all inclusive of associated costs to the contractor for implementation and allowance for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.

C2.2 Submission of Accrual Reports

The Contractor shall submit accrual reports to the client representative at the end of March and September each year for the duration of the Service Contract period from the date of appointment up to and including project closeout. This is to ensure that PMTE complies with the accounting framework GRAP, which requires that PMTE disclose all its accruals as at the end of each reporting date. Allowance must be made for submitting reports to the Employer's Representative on a monthly basis in terms of monthly and accumulative targets achieved with audited supporting documentation.



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Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

BILL OF QUANTITIES

TABLE OF CONTENTS

C.2.2.1	PRELIMINARY AND GENERAL
C.2.2.2	SOLAR INSTALLATION
C.2.2.3	ELECTRICAL INSTALLATION
C.2.2.4	BUILDING WORKS
C.2.2.5	WET WORKS (CIVIL)
C.2.2.6	PROVISIONAL SUMS
C.2.2.7	ALLOWANCE FOR CPG
C2.2.8	SUMMARY AND TOTAL TENDER AMOUNT

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

PAFURI LAND PORT OF ENTRY (LPOE): SUPPLY AND INSTALLATION OF SOLAR PANEL AND WASTE WATER FACILITY

BILL OF QUANTITIES

NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE C.2.2.1 : PRELIMINARY AND GENERAL

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	1	PRELIMINARY AND GENERAL				
		1200 A				
8.3	1.1	SCHEDULED FIXED-CHARGED AND VALUE-RELATED ITEMS				
8.3.1	1.1.2	Contractual Requirements	Sum	1		
8.3.2	1.1.3	Establishment of Facilities on the Site	Sum	1		
8.3.2.1	1.1.4	Facilities for Engineer	Sum	1		
(c)	1.1.5	Communication	Sum	1		
8.3.2.2	1.2	Facilities for Contractor				
(a)	1.2.1	Offices and storage sheds	Sum	1		
(d)	1.2.2	Living accomodation	Month	12		
(f)	1.2.3	Tools and equipment	Sum	1		
(h)	1.2.4	Dealing with water	Sum	1		
8.3.3	1.3	Other Fixed-charge Obligations				
8.3.4	1.3.1	Removal of Site Establishment	Sum	1		
8.3.5	1.3.2	Provision of all Working drawings instruction-, operational and maintenance manuals as well as compliance certificates	Sum	1		
8.3.6	1.3.3	Test and commissioning of the complete installation and handing over to the client	Sum	1		
8.3.7	1.3.4	Provision of as built drawings on completion (As installed drawings)	Sum	1		
8.3.8	1.3.5	Provision of a Solar PV Yield guarantee as specified	Sum	1		
8.3.9	1.3.6	Training of Employers staff	Sum	1		
8.4	1.4	Scheduled Time-related Items				
8.4.1	1.4.1	Contractual requirements	Sum	12		
8.4.2	1.5	Operation and Maintenance of Facilities on Site, for the Duration of Construction, except where otherwise stated				
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
8.4.2.1	1.5.1	Facilities for the Engineer				
(c)	1.5.2	Engineers Housing	Month	12		
(d)	1.5.3	Overhead profit on item 8.3.2.1 (c) above	%	-		
(e)	1.5.4	Survey Assistants and materials	Month	12		
8.4.2.2	1.5.5	Facilities for the Contractor				
(a)	1.5.6	Offices and storage sheds	Month	12		
(f)	1.5.7	Tools and equipment	Month	12		
(g)	1.5.8	Water supplies, electric power and communications	Month	12		
(h)	1.5.9	Dealing with water and electricity	Month	12		
(i)	1.5.10	Access	Month	12		
(j)	1.5.11	Plant (designated plant or plant for designated operations of plant for use during stated periods)	Month	12		
(l)	1.5.12	Provision of Health and Safety File	Sum	1		
(m)	1.5.13	Provision of Health and Safety Plan	Sum	1		
(n)	1.5.14	Provision of full-time health and safety officer	Sum	1		
(o)	1.5.15	Health and Safety Training	Sum	1		
(p)		Medicals for all workers/employers	Sum	1		
8.4.3	1.15.16	Supervision for the duration of the construction (full time level 3 supervision)	Month	12		
8.4.4	1.15.17	Company and head office overhead costs for the duration of the Contract	Month	12		
PSA 8.5	1.6.	SUMS STATED PROVISIONALLY BY ENGINEER				
	1.6.1	Additional tests ordered by Engineer	Each	12		
	1.6.2	Overheads, charges and profit on above	%	50000		
8.7	1.6.3	Dayworks (Provisional)				
	1.6.4	Note: to be executed on instruction of the Engineer Only				
	1.6.5	Labour				
(a)	1.6.6	Skilled	hr	5		
(b)	1.6.7	Semi skilled	hr	10		
(c)	1.6.8	Unskilled	hr	10		
8.8	1.6.9	Temporary Works				
(a)	1.6.10	Access to works	Sum	1		
(b)	1.6.11	Relocation of services	Sum	1		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
(c)	1.6.12	Existing Services	Sum	1		
(d)	1.6.13	Arrangements for spoiling and Disposal of soil	Sum	1		
(e)	1.6.14	Person for design, inspection and approval of temporary works	Sum	1		
(f)	1.6.15	Person for design, inspection and approval of Showring and Bracing	Sum	1		
(g)	1.6.16	Person for design, inspection and approval of Lateral Support	Sum	1		
		TOTAL PRELIMINARY AND GENERAL CARRIED FORWARD TO C.2.2.8. CALCULATION OF TENDER SUM				

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

PAFURI LAND PORT OF ENTRY (LPOE): SUPPLY AND INSTALLATION OF SOLAR PANEL AND WASTE WATER FACILITY

BILL OF QUANTITIES

NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE C.2.2.2 : SOLAR PV EQUIPMENT AND INSTALLATION

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C3.5.3.1	2.1	PV modules (including a 20-year product warranty)	SUM	1		
9	2.2	Inverters (including 10-year product warranty)	SUM	1		
11,12	2.3	BESS complete with power product conversion system and 10 -year warranty	SUM	1		
3,6,7	2.4	Electrical AC cabling, cable to containment, terminations , connection existing LV network, circuit breakers etc.	SUM	1		
8	2.5	Plant control, plant monitoring system including battery management system	SUM	1		
1.1	2.6	Lightning and surge protection devices	SUM	1		
1.1	2.7	Earthing installation	SUM	1		
8	2.8	Check metering installation	SUM	1		
18,20,21	2.9	Testing, commissioning and handing over to Client including tests required by supply authorities	SUM	1		
	2.10	Three year operation maintenance contract				
	2.10.1	.01 Year 1	SUM	1		
	2.10.2	.02 Year 2	SUM	1		
	2.10.3	.03 Year 3	SUM	1		
		TOTAL SOLAR PV EQUIPMENT AND INSTALLATION CARRIED FORWARD TO C.2.2.8. CALCULATION OF TENDER SUM				

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

PAFURI LAND PORT OF ENTRY (LPOE): SUPPLY AND INSTALLATION OF SOLAR PANEL AND WASTE WATER FACILITY

BILL OF QUANTITIES

NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE C.2.2.3 : ELECTRICAL INSTALLATION

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	3.1	Electrical reticulation and installation in building (including mechanical installation)				
C.3.5.3.2						
Part 1: 14.15	3.1.1	Distribution boards and kiosks as Specified and as per schedules and schematic diagrams 0.01 DB-M 0.02 Kiosk K3 0.03 Kiosk K4	Each Each Each	1 1 1		
Part 1: 5.19 Part 2.8	3.1.2	Light fittings as specified, including conduit outlet box and connection to conduit and wiring 0.01 Type A (40W LED tubular: flame retardent) 0.02 Type B (20W LED bulkhead) 0.03 Type C (53W Flood Light, complete with Pole as specified)	Each Each Each	18 5 5		
Part 1: 8,9,10	3.1.3	Galvanised Conduits and accessories, casted in concrete, built into brickwork, chased into brickwork, mounted in roof space, installed in ground or surface mounted including installation materials: 0.01 20mm diameter conduit 0.02 25mm diameter conduit	m m	255 10		
Part 2.7	3.1.4	Light switches including outlet box, cover plate and allconnection to conduit and wiring (16A) 0.01 Occupancy Switch	Each	6		
Part 2.7	3.1.5	Photocell (daylight switch)to control outside lights, including outlet box, mounting bracket and connections to conduit and wiring 0.01 Photocell for control of outside lights at Equipment room	Each	1		
Part 2.19	3.1.6	Switched socket outlets (15A) including outlet box, cover plate and connections to conduit and wiring 0.01 Single	Each	5		
Part 2.21	3.1.7	Isolator outlets including outlet box, cover plate and all connections to conduit and wiring 0.01 30A three pole in splash proof box with sliding lid	Each	3		
Part 2.13	3.1.8	Draw boxes including cover plate and connection to conduit (only boxes specifically indicated on drawings)				
	3.1.9	Draw wires	m	20		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
Part 2.29	3.1.10	Extension boxes/rings including connections to draw box (only where specifically indicated on drawings)	Sum			
Part 2.30	3.1.11	PVC insulated copper conductors installed in conduit, wireways, etc.				
	0.01	2,5 mm ²	m	445		
	0.02	4mm ²	m	255		
Part 1:18	3.1.12	Earth wire installed in conduit, wireways, etc.				
	.01	2,5mm ²	m	250		
Part 2.6	3.1.3	Connection of equipment to outlets including all flexible conduit, connectors, compression glands, wiring and fixing materials				
	0.01	Geyser replaced with Heat pumps	Each	13		
	0.02	Air conditioner three phase	Each	3		
Part 2.17	3.1.14	600/1000V PVC PVC SWA (ECC) PVC cable with copper conductors installed in ground, in cable sleeves or on cable tray including fixing materials				
	0.01	95mm ² 4 core Cu	m	25		
	0.02	50mm ² 4 core Cu	m	285		
	0.03	25mm ² 4 core Cu	m	255		
	0.04	16mm ² 4 core Cu	m	40		
	0.05	6mm ² 3 core Cu	m	300		
Part 2.17	3.1.15	Termination of 600/1000V PVC PVC SWA (ECC) PVC cable: With normal Pratley glands internally				
	0.01	95mm ² 4 core Cu	Each	2		
	0.02	50mm ² 4 core Cu	Each	4		
	0.03	25mm ² 4 core Cu	Each	9		
	0.04	16mm ² 4 core Cu	Each	4		
	0.05	6mm ² 3 core Cu	Each	14		
Part 2.9	3.1.16	Bare copper earth wire installed in ground, in sleeve pipes or on cable ladder including fixing materials:				
	0.01	70mm ²	m	25		
	0.02	35mm ²	m	285		
	0.03	16mm ²	m	555		
Part 2.9	3.1.17	Termination/jointing/cadwelding of bare copper earth wire:				
	0.01	70mm ²	Each	2		
	0.02	35mm ²	Each	4		
	0.03	16mm ²	Each	8		
	0.04	Equipment Room under floor Earth Mat as per drawings	Each	1		
Part 2.22	3.1.18	Installation of Inverter type Water heaters				
	.01	Inverter type 3.8kW (heating Capacity) water heaters.	Each	13		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
	3.1.19	Other items				
Part 2.20		0.01 Supply and install 12000BTU Midwall Split inverter type Air Conditioners	Each	3		
Part 2.17		0.03 Relocation of 3 existing security Lights to new position close-by	Each	3		
Part 2.17		0.04 Disconnection of cables from existing panel and connection to new Kiosk K3	Each	5		
Part 2.17		0.05 Cable joints in existing 25mm ² 4-core cables	Each	5		
		BILL NO. 3.1 CARRIED FORWARD TO ELECTRICAL WORKS SUMMARY PAGE				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Part 2.27	3.2	BILL NO.2				
		GENERATOR				
	3.2.1	Relocation of Generators (contractors to verify all dimension and specification of existing two machines)				
		0.01 Collect units from site and transport to workshop	Each	2		
		0.02 Manufacture sound and weather proof canopy, complete with 36 hr day tank, Controllers, monitors, etc as specified	Each	2		
		0.03 Install Machine in Canopy	Each	2		
		0.04 Supply and install DB-G	Each	1		
		0.05 Plinth for Machines as indicated on drawings	Each	2		
		0.06 Deliver Machine to site	Each	2		
		0.07 Perform all tests to verify correct functioning of machine and monitoring system	Each	2		
	0.08 Relocate fuel tanks to new position	Sum	1			
		BILL NO. 3.2 CARRIED FORWARD TO ELECTRICAL WORKS SUMMARY PAGE				

SCHEDULE C.2.2.3 : ELECTRICAL INSTALLATION

FINAL SUMMARY

BILL NO	FINAL SUMMARY	PAGE NO.	AMOUNT
3.1	Electrical reticulation and installation in building (including mechanical installation)	5	
3.2	Generator	8	
	TOTAL ELECTRICAL INSTALLATION CARRIED FORWARD TO C.2.2.8. CALCULATION OF TENDER SUM		

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

PAFURI LAND PORT OF ENTRY (LPOE): SUPPLY AND INSTALLATION OF SOLAR PANEL AND WASTE WATER FACILITY

BILL OF QUANTITIES

NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE C.2.2.4 : BUILDING WORK

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
PW371-A		BILL NO 4.1 FOUNDATIONS (PROVISIONAL) SUPPLEMENTARY PREAMBLES Nature of ground A soils investigation has been carried out on site by the engineer and the report is annexed to these bills of quantities Carting away of excavated material 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 Filling Notwithstanding the reference to prescribed multiple handling in clause 1 page 6 of the Standard System of Measuring Building Work, prices for filling and backfilling shall include for all selection and any multiple handling of material EXCAVATIONS, ETC Excavation in earth not exceeding 2m deep				
1.2	4.1.1	Trenches	m ³	31		
1.2	4.1.2	Holes	m ³	144		
		Extra over trench and hole excavations in earth for excavation in				
1.2	4.1.3	Soft rock	m ³	17		
1.2	4.1.4	Hard rock	m ³	17		
		Extra over all excavations for carting away				
1.2	4.1.5	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m ³	164		
		Risk of collapse of excavations				
1.2	4.1.6	Sides of trench and hole excavations not exceeding 1,5m deep	m ²	565		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
PW371-A		BROUGHT FORWARD				
1.2	4.1.7	Keeping excavations free of water Keeping excavations free of all water other than subterranean water FILLING ETC Earth filling obtained from the excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density	Item			
1.2	4.1.8	Backfilling to trenches, holes, etc Earth filling supplied by the contractor compacted to 95% Mod AASHTO density	m ³	72		
1.2	4.1.9	Under floors, steps, pavings, etc Coarse river sand filling supplied by the contractor	m ³	66		
1.2	4.1.10	Under floors etc Compaction of surfaces	m ³	6		
1.2	4.1.11	Compaction of ground surface under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 95% Mod AASHTO density Prescribed density tests on filling	m ²	51		
1.2	4.1.12	"Modified AASHTO Density" test SOIL POISONING Weedkiller	No	6		
1.2	4.1.13	Under paving etc Soil insecticide	m ²	61		
1.2	4.1.14	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m ²	120		
1.2	4.1.15	To bottoms and sides of trenches etc UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES 15MPa/19mm concrete	m ²	772		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
2.3	4.1.16	Surface blinding under footings and bases REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES 25MPa/19mm concrete	m ³	8		
2.3	4.1.17	Strip footings	m ³	13		
2.3	4.1.18	Bases	m ³	67		
2.2	4.1.19	Generator plinth	m ³	3		
2.1	4.1.20	Stub columns in foundations TEST BLOCKS	m ³	12		
2.2	4.1.21	Making and testing 150 x 150 x 150mm concrete strength test cube CONCRETE SUNDRIES Finishing top surfaces of concrete smooth with a wood trowel	No	15		
2.2	4.1.22	Generator plinth SMOOTH FORMWORK (DEGREE OF ACCURACY II) Smooth formwork to sides	m ²	11		
2.1	4.1.23	Rectangular stub columns in foundations REINFORCEMENT Mild steel reinforcement to structural concrete work	m ²	123		
2.1	4.1.24	16mm Diameter bars	t	1.2		
2.1	4.1.25	8mm Diameter bars High tensile steel reinforcement to structural concrete work	t	0.1		
2.1	4.1.26	12mm Diameter bars Fabric reinforcement	t	0.1		
2.4 e-g	4.1.27	Type 194 fabric reinforcement in concrete surface beds etc BRICKWORK IN FOUNDATIONS Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar	m ²	11		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
PW371-A		BROUGHT FORWARD					
3.1	4.1.28	One brick walls	m ²	13			
3.1	4.1.29	270mm Hollow walls of two half brick skins with 40mm high density polystyrene in cavity fixed with special ties	m ²	35			
3.1	4.1.30	One and a half brick walls Brickwork reinforcement	m ²	1			
3.1d	4.1.31	150mm Wide reinforcement built in horizontally	m	186			
3.1d	4.1.32	230mm Wide reinforcement built in horizontally Approved semi face bricks to match existing used on housing, pointed with recessed horizontal and vertical joints	m	4			
3.4	4.1.33	Extra over brickwork for semi face brickwork	m ²	50			
		BILL NO. 4.1 CARRIED FORWARD TO BUILDINGS WORKS SUMMARY PAGE					

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BILL NO 2				
		CONCRETE, FORMWORK AND REINFORCEMENT				
		SUPPLEMENTARY PREAMBLES				
		Cost of tests				
		The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the architect. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the architect. (Test cubes are measured separately)				
		Formwork				
		Description of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re- use				
		The vertical strutting shall be carried down to such construction as is sufficiently strong to afford the required support without damage and shall remain in position until the newly constructed work is able to support itself				
		Formworks to soffits of solid slabs etc shall be deemed to be slabs not exceeding 250mm thick unless otherwise described				
		Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described				
PW371-A		UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES				
		20MPa/19mm concrete				
2.4	4.2.1	Platforms cast in panels	m ³	2		
2.4	4.2.2	Aprons cast in panels	m ³	6		
2.4	4.2.3	Extra over concrete aprons for thickening size 150mm deep, 200mm top and tapering to 100mm at bottom including all excavation to 100mm, backfilling, etc.	m	40		
2.4	4.2.4	Surface beds cast in panels on waterproofing	m ³	18		
2.4	4.2.5	Steps	m ³	1		
		REINFORCED CONCRETE CAST ON/IN FORMWORK				
		35MPa/19mm concrete				
2.1	4.2.6	Slabs including beams and inverted beams	m ³	41		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
		TEST BLOCKS				
2.1	4.2.7	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	12		
		CONCRETE SUNDRIES				
		Finishing top surfaces of concrete smooth with a wood trowel				
2.1	4.2.8	Aprons, etc to falls	m ²	52		
		Preparing top surfaces of concrete for and including Dulux Trade Tuffcote WB acid resistant epoxy floor coating, all per the Manufacturer's specification				
2.1	4.2.9	Surface beds to falls	m ²	120		
2.1	4.2.10	Bottom of 500mm wide trench (1020mm below surface bed level)	m	1		
		SMOOTH FORMWORK (DEGREE OF ACCURACY II)				
		Smooth formwork to sides				
2.1	4.2.11	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	122		
2.1	4.2.12	Sloping and stepped outer edges of stairs not exceeding 300mm high extreme	m	3		
		Smooth formwork to soffits				
2.1	4.2.13	Slabs exceeding 250mm and not exceeding 500mm thick	m ²	141		
		Smooth formwork to sides and soffits				
2.1	4.2.14	Beams	m ²	49		
		Boxing in smooth formwork to form				
2.1	4.2.15	25 x 25mm Chamfer along top or bottom edge	m	98		
		MOVEMENT JOINTS ETC				
		Expansion joints with bitumen impregnated softboard between vertical concrete and brick surfaces				
2.4n-x	4.2.16	10mm Joints not exceeding 300mm high	m	80		
		REINFORCEMENT				
		Mild steel reinforcement to structural concrete work				
2.1	4.2.17	8mm Diameter bars	t	0.1		
		High tensile steel reinforcement to structural concrete work				
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
2.1	4.2.18	16mm Diameter bars	t	2.8		
2.1	4.2.19	12mm Diameter bars	t	0.1		
2.1	4.2.20	10mm Diameter bars	t	0.1		
BILL NO. 4.2 CARRIED FORWARD TO BUILDINGS WORKS SUMMARY PAGE						

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
PW371-A	4.3	BILL NO 3 MASONRY SUPPLEMENTARY PREAMBLES BRICKWORK Sizes in descriptions Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick SUPERSTRUCTURE Brickwork of NFP bricks in class II mortar				
	3.1	4.3.1 One brick walls	m ²	41		
	3.1	4.3.2 270mm Hollow walls in two half brick skins with 40mm high density polystyrene infill fixed with special ties BRICKWORK SUNDRIES Miscellaneous	m ²	119		
	3.1	4.3.3 Closing 40mm cavity of hollow wall vertically with brickwork half brick wide Brickwork reinforcement	m	12		
	3.1d-e	4.3.4 150mm Wide reinforcement built in horizontally	m	121		
	3.1d-e	4.3.5 230mm Wide reinforcement built in horizontally "Fabcon" prestressed fabricated concrete lintels	m	306		
	3.1	4.3.6 110 x 75mm Lintels in lengths not exceeding 3m "Corobrik Fynbos Rooi" or similar approved FBS face bricks pointed with recessed horizontal and vertical joints	m	7		
	3.4	4.3.7 Extra over brickwork for face brickwork	m ²	134		
BILL NO. 4.3 CARRIED FORWARD TO BUILDINGS WORKS SUMMARY PAGE						

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
PW371-A		BILL NO 4.4				
		WATERPROOFING				
		SUPPLEMENTARY PREAMBLES				
		Waterproofing 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				
		DAMP-PROOFING OF WALLS AND FLOORS One layer of 375 micron "Plastall Gundle Brikgrip DPC" embossed damp proof course				
3.1	4.4.1	In walls One layer of 250 micron "Plastall Gundle Gunplas USB Green" waterproof sheeting sealed at laps with pressure sensitive tape	m ²	20		
2.4	4.4.2	Under surface beds	m ²	120		
2.4b-d	4.4.3	Vertically against trench walls SEALING STRIPS, JOINT SEALANTS, ETC "Compriband" bitumen impregnated foam plastic joint sealing strips	m ²	2		
2.4x	4.4.4	10 x 25mm In expansion joints	m	80		
BILL NO. 4.4 CARRIED FORWARD TO BUILDINGS WORKS SUMMARY PAGE						

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
PW371-A		BILL NO 4.6				
		IRONMONGERY				
		SIGNAGE				
		Approved				
		Note: All signage is to be in accordance with SANS 0400 Section TT. Refer to drawings in the back of this bill of quantities for full specification.				
	16.9	4.6.1	Sign 1, 680 x 680mm (Battery Room - with and including standard signs PV1 and WW4)	No	4	
	16.9	4.6.2	Sign 2, 580 x 580mm consisting of one each of signs PV2, MV9, MV10 and MV5	No	4	
	16.9	4.6.3	Sign 3, 290 x 290mm (GA20)	No	2	
	16.9	4.6.4	Sign 4, 290 x 290mm (PV5)	No	4	
16.9	4.6.5	Sign 5, 290 x 290mm (KS334)	No	2		
16.9	4.6.6	Sign 6, 725 x 290mm high (Switchroom- WW7)	No	2		
16.9	4.6.7	Sign 7, 290 x 440mm high (Risk of Electric Shock - WW7)	No	2		
16.9	4.6.8	290 x 290mm Stick on plastic sign with fire exit or fire extinguisher symbol (F13)	No	6		
BILL NO. 4.6 CARRIED FORWARD TO BUILDINGS WORKS SUMMARY PAGE						

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
PW371-A		BILL NO 4.7				
		STRUCTURAL STEELWORK				
		SUPPLEMENTARY PREAMBLES				
		Descriptions				
		Descriptions of bolts shall be deemed to include nuts and washers				
		Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete				
		Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete				
		STEEL TRUSSES ETC				
		Note:All structural steel is to be galvanised to Z275 spelter standard				
		Welded portal frames with flat bearer, gusset and connection plates and angle cleats, bolted to concrete				
5.1	4.7.1	Single pitch portal frame 6403mm wide x 1167mm high one side and 3582mm high other side, of 203 x 133mm x 25kg/m I-section rafters and columns (In No 11) (Type A)	t	3.53		
5.1	4.7.2	Single pitch portal frame 6403mm wide x 1489mm high one side and 3902mm high other side, of 203 x 133mm x 25kg/m I-section rafters and columns (In No 11) (Type B)	t	3.71		
5.1	4.7.3	Single pitch portal frame 6403mm wide x 2327mm high one side and 4742mm high other side, of 203 x 133mm x 25kg/m I-section rafters and columns (In No 11) (Type C)	t	4.17		
5.1	4.7.4	Single pitch portal frame 6403mm wide x 2647mm high one side and 5062mm high other side, of 203 x 133mm x 25kg/m I-section rafters and columns (In No 11) (Type D)	t	4.35		
5.1	4.7.5	Single pitch portal frame 12647mm wide x 3622mm high one side and 4702mm high other side, of 203 x 133mm x 25kg/m and 254 x 146mm x 33kg/m I-section rafters and columns (In No 6) (Type G)	t	4.4		
5.1	4.7.6	Single pitch portal frame 6403mm wide x 3507mm high one side and 5922mm high other side, of 203 x 133 x 25kg/m and 254 x 146mm x 31kg/m I-section rafters and columns (In No 5) (Type E)	t	2.48		
5.1	4.7.7	Single pitch portal frame 6403mm wide x 3772mm high one side and 6188mm high other side, of 203 x 133mm x 25kg/m and 254 x 146mm x 31kg/m I-section rafters and columns (In No 6) (Type F)	t	3.07		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
5.1	4.7.8	Bolts to trusses etc High tensile bolts	t	0.24		
5.1	4.7.9	16mm L-shaped holding down bolts with horizontal leg 200mm long and vertical leg with 100mm length threaded and average 1100mm long, with nut and washer STEEL PURLINS, GIRTS, BRACING, ETC Note:All structural steel is to be galvanised to Z275 spelter standard Purlins and girts, bolted to steel	No	512		
5.1	4.7.10	Cold-formed lipped channel purlins Welded bracing etc with flat connection plates, bolted to steel	t	9.56		
5.1	4.7.11	Angle bracing	t	3.22		
BILL NO. 4.7 CARRIED FORWARD TO BUILDINGS WORKS SUMMARY PAGE						

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
PW371-A		BILL NO 4.8				
		METALWORK				
		BALUSTRADING				
		"Macsteel" or similar and approved welded and bolted patent galvanised steel balustrading to walkways and steps				
	15.4,5	4.8.1	Horizontal balustrading 1100mm high of 34.1 x 2.5mm diameter continuous pipe top and bottom rails and 42.8 x 2.5mm stanchions at average 1400mm centres bolted to concrete (bolts elsewhere)	m	14	
	15.4,5	4.8.2	Raking balustrading 1100mm high of 34.1 x 2.5mm diameter continuous pipe top and bottom rails and 42.8 x 2.5mm stanchions at average 1000mm centres bolted to concrete (bolts elsewhere)	m	2	
	15.4,5	4.8.3	Extra over for long radius bend	No	4	
	15.4,5	4.8.4	Extra over for rubber end closure to raking balustrade	No	4	
	15.4,5	4.8.5	M10 x 90mm Chemical anchor with loose bolt	No	22	
			SUNDRY GALVANIZED STEELWORK			
			Floor duct covers			
	5.1	4.8.6	30 x 6mm Flat section bearer welded to angle frame	kg	5	
	5.1	4.8.7	Extra for mitred L-intersection	No	4	
	5.1	4.8.8	50 x 50 x 6mm Angle section framing with 30 x 6mm flat section bent lugs each 200mm girth welded on at 500mm centres including embedding in concrete	kg	19	
	5.1	4.8.9	Extra for mitred L-intersection	No	4	
			Natural anodised aluminium			
5.1	4.8.10	2mm Chequer plate duct covers 580mm wide x 1570mm long, including 50 x 50 x 6mm angle iron framing, laid loose over trench	No	1		
		GALVANIZED PRESSED STEEL TRANSFORMER ROOM DOORS AND FRAMES				
10.3	4.8.11	Type MV double door 1575 x 2076mm high, each leaf with standard louvred ventilation panel, with rebated frame suitable for one brick wall, heavy duty padbolt and 150mm barrel bolts to one leaf	No	3		
10.3	4.8.12	1200mm Deep P-Series Awning 1500mm wide, of 3mm aluminium coloured board, including fixing in position extinguisher symbol (F13)	No	3		
BILL NO. 4.8 CARRIED FORWARD TO BUILDINGS WORKS SUMMARY PAGE						

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
PW371-A		BILL NO 4.9				
		PLASTERING				
		INTERNAL PLASTER				
		Cement plaster on brickwork				
11.1.1	4.9.1	On walls	m ²	216		
11.1.1	4.9.2	On narrow widths	m ²	2		
11.1.1	4.9.3	On walls in trenches	m ²	3		
BILL NO. 4.9 CARRIED FORWARD TO BUILDINGS WORKS SUMMARY PAGE						

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
PW371-A		BILL NO 4.10				
		PLUMBING AND DRAINAGE				
		SOIL DRAINAGE				
		"Vulcathene" pipes				
18.4.3	4.10.1	102mm Pipes vertically or ramped to cleaning eyes etc (no excavation)	m	1		
18.4.3	4.10.2	102mm Pipes laid in and including trenches not exceeding 1m deep	m	9		
		Extra over "Vulcathene" pipes for fittings				
18.4.3	4.10.3	102mm End cap	No	1		
18.4.3	4.10.4	102mm Bend	No	2		
18.4.3	4.10.5	102mm Junction	No	1		
18.4.3	4.10.6	102mm Bend with ventilation valve	No	2		
18.4.3	4.10.7	102mm Access junction	No	1		
		Sundries				
18.4.3	4.10.8	Testing drainage pipe system		Item		
18.4.3	4.10.9	Sump soakage pit 1 x 1 x 1m deep filled with gravel	No	2		
		DUCTS FOR ELECTRICAL AND TELEPHONE CABLES ETC				
		uPVC pipes				
18.4.3	4.10.10	110mm Pipes laid in and including trenches not exceeding 1m deep	m	23		
18.4.3	4.10.11	Set of six 110mm pipes laid in and including trenches not exceeding 1m deep	m	2		
		Extra over uPVC pipes for fittings				
18.4.3	4.10.12	110mm Long radius bend	No	4		
		TAPS, VALVES, ETC				
		Brass				
18.9.2	4.10.13	20mm Bibcock with hose union	No	2		
		"Cobra Watertech"				
18.9.2	4.10.14	20mm 131RB stopcock	No	1		
		WATER SUPPLIES				
		Class 0 copper pipes				
18.5.4	4.10.15	22mm Pipes	m	10		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
18.5.4	4.10.16	22mm Pipes chased into brick walls	m	6		
18.5.4	4.10.17	22mm Pipes laid in and including trenches Extra over class 0 copper pipes for capillary fittings	m	5		
18.5.4	4.10.18	22mm Fittings FIRE APPLIANCES ETC	No	20		
18.8g	4.10.19	9kg Dry chemical fire extinguisher	No	3		
BILL NO. 4.10 CARRIED FORWARD TO BUILDINGS WORKS SUMMARY PAGE						

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
PW371-A		BILL NO 4.11				
		PAINTWORK				
		PAINTWORK, ETC TO NEW WORK				
		ON FLOATED PLASTER SURFACES				
		One coat primer and two coats exterior quality Dulux Weatherguard paint				
14.1-4,7-8	4.11.1	External walls	m ²	134		
		One coat primer and two coats enamel paint				
14.1-4,7-8	4.11.2	Internal walls	m ²	218		
14.1-4,7-8	4.11.3	Internal walls in trenches	m ²	3		
		ON "OFF SHUTTER" CONCRETE SURFACES				
		"MCC Multi Hyseal 210/211" slurry				
14.1-4,7-8	4.11.4	On flat roofs	m ²	141		
14.1-4,7-8	4.11.5	On turn-downs exceeding 300mm girth	m ²	17		
		ON METAL SURFACES				
		One coat primer and two coats "Dulux" enamel paint				
14.1-4,7-8	4.11.6	Transformer room doors and frames	m ²	28		
		ON POLYSTYRENE BOARD SURFACES				
		One coat primer and two coats Polvin Super Acrylic PVA paint				
14.1-4,7-8	4.11.7	Ceilings	m ²	120		
BILL NO. 4.11 CARRIED FORWARD TO BUILDINGS WORKS SUMMARY PAGE						

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
PW371-A		BILL NO 4.12				
		EXTERNAL WORK				
		DEMOLITIONS ETC				
		Breaking up and removing				
1.1	4.12.1	Approximately 200 x 500mm concrete kerbs below existing dangerous game fence	m	126		
		Taking down and removing				
		Note: The contractor must, subject to approval by the Principal Agent, set aside material taken down from the dangerous game fence, which will be inspected, and, if found to be suitable be used in the new fence. The new fence has been measured in full and any material re used will be set off against the new material measured				
1.1	4.12.2	Diamond mesh fence 1,20m high with steel posts and droppers	m	50		
1.1	4.12.3	Dangerous game fence 3m high overall with 45 degree angle support arm, mesh fence panels, 900mm BTC flat coil, 3m high rail profile posts cast into and including removal of concrete bases, filling in and compaction of holes, etc	m	126		
		SITE CLEARANCE				
		Site clearance				
1.1	4.12.4	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m ²	6128		
		REMOVAL OF TREES ETC				
		Taking out and removing, grubbing up roots and filling in holes				
1.1	4.12.5	Tree stump exceeding 500mm and not exceeding 1000mm girth	No	6		
		Cutting down and removing, grubbing up roots and filling in holes				
1.1	4.12.6	Tree exceeding 200mm and not exceeding 500mm girth	No	45		
1.1	4.12.7	Tree exceeding 500mm and not exceeding 1000mm girth	No	35		
1.1	4.12.8	Tree exceeding 1000mm and not exceeding 1500mm girth	No	15		
1.1	4.12.9	FILLING	no	15		
		Average 25mm diameter pebble stone filling to be sourced by the Contractor and carted on				
1.2	4.12.10	50mm Thick layer spread and levelled over site	m ²	6128		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
		Compaction of surfaces				
1.2	4.12.11	Compaction of ground surface under pebble layer, including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density	m ²	6128		
		FENCING				
		Dangerous game fencing, with rail profile steel main and corner posts, steel intermediate fence posts, etc including steel bolts, straining eye bolts, etc, site clearance and preparation of ground				
2.3	4.12.12	300 x 300 x 1000mm Deep 20MPa unreinforced concrete post base including excavation, risk of collapse, carting away, etc	No	159		
2.3	4.12.13	450 x 450 x 1200mm Deep 20MPa unreinforced concrete post base including excavation, risk of collapse, carting away, etc	No	53		
2.3	4.12.14	600 x 600 x 1200mm Deep 20MPa unreinforced concrete post base including excavation, risk of collapse, carting away, etc	No	24		
2.3	4.12.15	750 x 750 x 1200mm Deep 20MPa unreinforced concrete post base including excavation, risk of collapse, carting away, etc	No	2		
2.3	4.12.16	170mm Wide x 340mm deep x 1200mm long 20MPa unreinforced concrete ground beam between posts, including necessary compaction, excavation, formwork to sides, etc	m	149		
21.5	4.12.17	51mm Outside diameter x 3mm steel post 2800mm long with 150 x 150 x 4mm base plate and domed capping plate welded on and with lower 800mm length cast into concrete base (base elsewhere)	No	159		
21.5	4.12.18	109.5 x 109.5mm x 30Kg/m rail profile intermediate steel post 3000mm long, three times holed for 25mm diameter cable, with 200 x 200 x 6mm base plate welded on and with lower 1000mm length cast into concrete base (base elsewhere)	No	53		
21.5	4.12.19	109.5 x 109.5mm x 30Kg/m rail profile diagonal strut 3000mm long with top end splayed and welded on and with lower 250mm length cast into concrete base (base elsewhere)	No	4		
21.5	4.12.20	151 x 127mm x 45Kg/m rail profile main and intermediate steel post 3000mm long, three times holed for 25mm diameter cable, with 250 x 250 x 6mm base plate welded on and with lower 1000mm length cast into concrete base (base elsewhere)	No	28		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
21.5	4.12.21	25 x 25 x 3mm Wire mesh panels 1950mm high to match existing, bolted to posts and with bottom 30mm cast into ground beam (bolts, ground beams and cover plates elsewhere)	m	180		
21.5	4.12.22	25mm Diameter woven wire steel cable threaded through steel supports and bolted on (bolts and supports elsewhere)	m	540		
21.5	4.12.23	50 x 6mm Cover plates 1950mm long with seven slotted holes (bolts elsewhere)	No	81		
21.5	4.12.24	50 x 50 x 5mm Angle iron vertical support 2830mm long with seven slotted holes to one flange and four 50x50mm cut outs to other flange, welded on (bolts elsewhere)	No	81		
21.5	4.12.25	3mm Outside diameter binding wire twisted around 51mm post and 25mm cable and neatly finished off	No	477		
21.5	4.12.26	5mm Outside diameter wire strand threaded through holes in supports and tied with 3mm binding wire	m	1079		
21.5	4.12.27	25 x 25 x 5mm Angle iron support arm 431mm long, three times holed and welded on at 45 degree angle to vertical support (vertical support elsewhere)	No	81		
21.5	4.12.28	Stafix nail-on heavy duty post line insulator	No	162		
21.5	4.12.29	900mm Diameter BTC vertical flat wrap tied to vertical supports, etc with 3mm binding wire	m	180		
21.5	4.12.30	M8 cup square bolts with shear nuts in differing lengths	kg	10		
21.5	4.12.31	M12 U-bolt approximately 150mm girth with shear nuts	No	243		
21.5	4.12.32	Junction of new with existing dangerous game fence	No	2		
21.5	4.12.33	One coat Dulux Trade A100 etch primer and two coats Dulux Trade bituminous aluminium silver paint on steel 25 x 25 x 3mm Mesh screens (both sides measured over the full flat area)	m ²	691		
21.5	4.12.34	Rails, bars, pipes, etc	m ²	92		
21.5	4.12.35	Rails, bars, pipes, etc not exceeding 300mm girth Galvanised security fencing, with steel pipe posts, gates, etc including galvanised steel bolts, etc, site clearance and preparation of ground Note: All posts, rails, cover plates and the entire gate assembly to be hot dipped galvanised in accordance with ISO 1461 (min 70 microns). No cutting, drilling or welding will be allowed on site	m	1280		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
2.3	4.12.36	500 x 500 x 1200mm Deep 20MPa unreinforced concrete post base including excavation, risk of collapse, carting away, etc	No	110		
2.3	4.12.37	700 x 700 x 1500mm Deep 20MPa unreinforced concrete post base including excavation, risk of collapse, carting away, etc	No	4		
2.3	4.12.38	20MPa unreinforced concrete slab 1000mm wide x 170mm deep, including necessary compaction, excavation, formwork to edges, etc	m	331		
2.3	4.12.39	20MPa unreinforced concrete slab 1000mm wide x 255mm deep, with 400mm wide section tapered to 200mm thick, including necessary compaction, excavation, formwork to edges, etc	m	12		
21.5	4.12.40	101,6mm Outside diameter x 4,5mm grade 30 WA steel post 4250mm long, nine times holed, with 250 x 250 x 6mm base plate and 101.6mm diameter x 6mm capping plate welded on and with lower 1300mm length cast into concrete base (base elsewhere)	No	107		
21.5	4.12.41	101,6mm Outside diameter x 4,5mm grade 30 WA steel corner post 4250mm long, twenty seven times holed, with 250 x 250 x 6mm base plate and 101.6mm diameter x 6mm capping plate welded on and with lower 1300mm length cast into concrete base (base elsewhere)	No	3		
21.5	4.12.42	219mm Outside diameter x 4,5mm grade 30 WA steel gate post 4250mm long, with 300 x 300 x 6mm base plate welded on, the post filled with 15MPa unreinforced concrete and with lower 1300mm length cast into concrete base (base elsewhere)	No	4		
21.5	4.12.43	4mm Diameter high tensile Galfan Class A coated wire mesh panels 2940mm high, with 76.2 x 12.7mm centre to centre apertures, bolted to posts (bolts and cover plates elsewhere)	m	324		
21.5	4.12.44	50 x 6mm Cover plates 2940mm long with nine slotted holes (bolts elsewhere)	No	114		
21.5	4.12.45	50 x 50 x 5mm Angle iron top rail 1290mm long with four slotted holes (bolts elsewhere)	No	2		
21.5	4.12.46	50 x 50 x 5mm Angle iron top rail 1870mm long with six slotted holes (bolts elsewhere)	No	2		
21.5	4.12.47	50 x 50 x 5mm Angle iron top rail 2940mm long with nine slotted holes (bolts elsewhere)	No	108		
21.5	4.12.48	40 x 5mm Top rail fixing bracket 200mm long with two slotted holes (bolts elsewhere)	No	107		
21.5	4.12.49	40 x 5mm Top rail fixing bracket 295mm girth twice bent to profile with two slotted holes (bolts elsewhere)	No	3		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
21.5	4.12.50	Gate hinge formed of three 100 x 50mm parallel flange channel sections each 40mm long, two twice holed and all welded on (bolts elsewhere)	No	12		
21.5	4.12.51	Personnel gate hinge formed of two 40 x 6mm backing plates 60mm long and three 40 x 6mm hinge plates welded on and holed for bolts (bolts elsewhere)	No	2		
21.5	4.12.52	Double gate 5800 x 2950mm high overall, in two equal leaves each consisting of 60 x 40 x 2mm tubular framing, one transome, one mullion and two diagonal cross braces, fitted with 4mm high tensile Galvan Class A coated wire mesh panels with 76,2 x 12,7mm centre to centre apertures, bolted to mullions, framing and transome with and including 50 x 6mm cover plates, M8 x 75mm long cup square bolts with shear nuts and with two 50 x 5mm locking latches 105mm long holed, one end rounded and other end welded on	No	1		
21.5	4.12.53	Double gate 5800 x 2950mm high overall, as above, but one leaf with 1300 x 2050mm high personnel gate therein	No	1		
21.5	4.12.54	610mm Diameter BTC coil bolted to top rail (rail and bolts elsewhere)	m	342		
21.5	4.12.55	M8 cup square bolts with shear nuts in differing lengths	kg	88		
21.5	4.12.56	M12 cup square bolts with shear nuts in differing lengths	kg	0.1		
21.5	4.12.57	M16 cup square bolts with shear nuts in differing lengths	kg	3		
		Signage to fencing				
21.5.5	4.12.58	Fence sign 1, 440 x 290mm high (Warning)	No	2		
21.5.5	4.12.59	Fence sign 2, 290 x 440mm high (Risk of Electric Shock - WW7)	No	11		
21.5.5	4.12.60	Fence sign 3, 290 x 150mm high (Electric Fence)	No	10		
BILL NO. 4.12 CARRIED FORWARD TO BUILDINGS WORKS SUMMARY PAGE						

SCHEDULE C.2.2.4 : BUILDING WORK

FINAL SUMMARY

BILL NO	SUMMARY FOR BUILDING WORK	PAGE NO.	AMOUNT
4.1	Foundations	10	
4.2	Concrete, Formwork and Reinforcement	14	
4.3	Masonry	17	
4.4	Waterproofing	18	
4.5	Ceilings, etc	19	
4.6	Ironmongery	20	
4.7	Structural Steelwork	21	
4.8	Metalwork	23	
4.9	Plastering	24	
4.1	Plumbing and Drainage	25	
4.11	Paintwork	27	
4.12	External Works	28	
	TOTAL BUILDING WORK CARRIED FORWARD TO C.2.2.8. CALCULATION OF TENDER SUM		

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

PAFURI LAND PORT OF ENTRY: SUPPLY AND INSTALLATION OF SOLAR PANELS

BILL OF QUANTITIES

NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE C.2.2.5 : WET WORKS (CIVIL)

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SANS 1200C	5.1	BILL 1 : SITE CLEARANCE				
		1200 C				
PSC 8.2.1	5.1	Clear and grub (2m wide strip)	m	1750		
8.2.2	5.1.1	Remove and grub large trees and tree stumps of girth				
(a)	5.1.2	over 1m and up to and including 2m	No	30		
(b)	5.1.3	over 2m and up to and including 3m	No	2		
8.2.10	5.1.4	Remove topsoil to nominal depth of 150mm and stockpile and reinstate	m3	950		
BILL NO. 5.1 CARRIED FORWARD TO WET WORKS SUMMARY PAGE						

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
SANS 1200 DB	5.2	BILL 5.2 : SEWER EARTHWORKS (PIPE TRENCHES)				
PSDB 8.3.2 (a)	5.2.1 5.2.1.1	Excavation Excavate in all materials for trench, backfill, compact, test and dispose of surplus/unsuitable material within the free haul distance. For uPVC solid wall sewer pipes according to SABS 791, class 34(300KPA) for trench depths				
i)	5.2.1.2	Over 0.0m and up to 1.5m	m	730		
ii)	5.2.1.3	Over 1.5m and up to 2.5m	m	70		
(b) i)	5.2.1.4 5.2.1.5	Extra-over items (a) for: (1) Intermediate excavation	m ³	35		
ii)	5.2.1.6	(2) Hard rock excavation	m ³	24		
(c)	5.2.1.7	Extra-over for				
	5.2.1.8	Excavate and dispose of unsuitable material from trench bottom	m ³	24		
8.3.3 8.3.3.1	5.2.2 5.2.2.1	Excavation Ancillaries Make up deficiency in backfill material.				
(a)	5.2.2.2	From other necessary excavations on site within the freehaul distance.	m ³	24		
8.3.5	5.2.2.3	Existing services that intersect or adjoin a pipe trench				
(a)	5.2.2.4	Services that intersect a trench	No	15		
(b)	5.2.2.5	Services that adjoin a trench	m	1400		
SANS 1200LB	5.2.3	1200 LB - PROVISION OF BEDDING				
8.2.1	5.2.3.1	Provision of Bedding from Trench Excavation within the freehaul distance				
	5.2.3.2	Available from trench within the freehaul distance				
8.2.2	5.2.3.3	Supply only of Bedding by Importation				
8.2.2.3	5.2.3.4	Selected fill material imported from commercial sources				
(a)	5.2.3.5	Selected granular material	m ³	84		
(b)	5.2.3.6	Selected fill material	m ³	51		
8.2.4	5.2.4	Encasing of Pipes in Concrete				
(a)	5.2.4.1	For all pipe sizes	m ³	10		
SANS 1200LD	5.2.5	1200 LD - PIPEWORK (SEWER)				
8.2.1	5.2.5.1	Supply, lay, joint, bed uPVC pipe and test pipe line according to SANS 791, Class 34 (300KPA)				
	5.2.5.2	110mm nominal diameter	m	980		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
	5.2	BROUGHT FORWARD					
8.2.3	5.2.5.3	75mm nominal diameter	m	350			
	5.2.5.4	Manholes, etc.					
	5.2.5.5	Manholes complete with Type 4 cover and frame, for depths over and up to					
	5.2.5.6	0.0 to 1.0m	No	6			
	5.2.5.7	1.0 to 1.5m	No	7			
	5.2.5.9	1.5 to 2.0m	No	6			
	5.2.5.10	2.0 to 2.5m	No	7			
	PSLD	5.2.6	Pump Chamber				
	8.2.3	5.2.6.1	Complete unit, 1.5m diameter, watertight chamber with all accessories as per the submersible pump chamber as per drawing C1546/09				
	1)	5.2.6.2	6m - 6.5m	No	2		
2)	5.2.6.3	0m - 1m	No	1			
PDD7	5.2.6.4	Submersible Pump Supply, Install, Test and Commission Submersible Pump (duty and standby pumps).H= 24, Q=7,2l/s. (Material to be mild steel or better (Selection to be approved by Engineer prior to ordering)	Prov Sum	2	80 000.00	R 160 000.00	
	5.2.6.5	Overheads, charges and profit on the item above	%	R 160 000.00			
PDD7	5.2.7	Supply and install pump station pipe work (PE100 PN10 HDPE) as per drawing C1546/09					
	5.2.7.1	80mm Dia 1500mm long Puddle flange piece with puddle fange at 550mm (Item 1)	No	2			
	5.2.7.2	80mm PE 100 steel flanged 90° bend special-Discharge connection with duck foot special to be permanently bolted to sump floor, guide bars and discharge pipes. Flanges drilled to SABS 1123, Table 1000 (Item 2)	No	2			
	5.2.7.3	Galvinised Double guide bars (Item 3)	No	2			
	5.2.7.4	80mm 90° short radius bend, flanged on both ends, flangess drilled to SABS 1123, table 1000 (Item 4)	No	1			
	5.2.7.5	80mm Diam 5700mm long pipe flanged on both ends, Flanges drilled to SABS 1123, table 1000 (Item 5)	No	2			
	5.2.7.6	80mm flanged single door swing check valve. Flanges drilled to SABS 1123, table 1000. Manufactured to SABS 192 (Item 6)	No	2			
	5.2.7.7	80mm Knife gate valve. Wafer type (Item 7)	No	2			
	5.2.7.8	VJ flange adaptor , flanges drilled to SABS 1123, table 1000 (Item 8)	No	2			
	5.2.7.9	80mm pipe special 1770mm long with puddle flange , flanged on dischard end. Flanges drilled to SABS 1123, table 1000 (Item 9)	No	1			
	5.2.7.10	80mm flanged spool pieace, 300mm long(Flanges drilled to SABS 1123, table 1000. Manufactured to SABS 192) (Item 10)	No	1			
	5.2.7.11	80mm PE 100 HDPE stub flange with HGD backing flange to suite (Item 11)	No	4			
		CARRIED FORWARD					

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	5.2	BROUGHT FORWARD				
	5.2.7.12	150mm Diam spool piece, 760mm long, with puddle flange at 380mm (Item 12)	No	2		
	5.2.7.13	150mm Diam spool piece 760mm long on end plain, one end flanged with puddle at 380mm. (flange drilled to SABS 1123 and manufactured to SANS 192) (Item 13)	No	2		
	5.2.7.14	150mm Diam flanged flap gate valve (Gerg or equally approved) (Item 14)	No	1		
	5.2.7.15	80mm 90° special bend with brackets to be tied to chamber wall, flanged on both ends, flanges drilled to SABS 1123, table 1000 (Item 15)	No	1		
	5.2.7.16	Special Bracket (manufactured to SANS 192 (Item 16))	No	1		
	5.2.7.17	Electrical switch gear plus level switches -Design and details to be provided by D.R.A	No	1		
	5.2.7.18	Upper Guide bar brackets	No	2		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
PSGE 5.1 (a)	5.2.8 5.2.8.1	Pump Control Building Supply and install reinforced precast concrete heavy duty signal house (1,860m x 2,040m x 2,260m height) with dip galvanized door complete with locks as per drawing C1546/10	Sum	1		
(b)	5.2.8.2	Design Supply and install electrical equipment, DB board, cable ducts complete to signal house, connect to pumps, test and commision. (Design to be approved before installation)	sum			
PCB	5.2.9	Fences				
PCB 4.2	5.2.9.1	Supply and install 1800 mm high Palisade fence	m	100		
PCB 3.9	5.2.9.2	1800mm highpalisade vehicle gate	No	1		
PCB 3.10	5.2.9.3	1800mm high galvanised steel pedestrian gate	No	2		
PSLD	5.2.10	Handling of Existing Septic Tanks and french drains				
8.4.1	5.2.10.1	De-Sludge existing septic tanks and dispose of sludge	no	25		
8.4.3	5.2.10.2	Removal of existing septic tanks and french drains	no	12		
8.4.4	5.2.10.3	Backfill existing septic tanks with selected granular material compacted to 90% MOD AASHTO in 200 mm layers	m ³	450		
8.4.5	5.2.10.4	Refurbish existing septic tank or build new 36 hour storage reinforced concrete septic tank with screen and install pipe connection to sump	Prov Sum	1	350 000.00	R 350 000.00
8.4.6	5.2.10.5	Overheads, charges and profit on the item above	%	R 350 000.00		
BILL NO. 5.2 CARRIED FORWARD TO WET WORKS SUMMARY PAGE						

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BROUGHT FORWARD				
	5.3	BILL 5.3: CONTAINERISED SEWER PACKAGE TREATMENT PLANT (TRICKLE FILTER)				
PP	5.3.1	PACKAGE PLANT				
PP 22.1 (a)	5.3.1.1	Supply ,install and commission Trickle filter treatment plant complete with piping, valves, fittings, electrical components. Sewage package plant to cater for an average daily flow of 150 Kℓ/day including delivery to site, As per Specification PP: Package Plant (Material to be mild steel or better) (Selection to be approved by Engineer prior to ordering)	Prov Sum	1	4 650 000.00	R 4 650 000.00
	5.3.1.3	Contractor's charge to allow for handling costs and profit in respect of subitem 3.1.1	%	4 650 000.00		
PP 22.2	5.3.1.2	Supply and Install 5250 litre LLDPE vertical water storage tank with UV-stabilised outer layer with 10 year warranty	No.	2		
	5.3.1.3	Supply and Install 0.75kW Centrifugal Booster Pump with controller	No.	2		
	5.3.1.4	Supply and install Electrical connection point for 150m ³ /day trickle filter sewage plant, including excavation, bedding, cabling, danger tape, and backfilling	Sum	1		
	5.3.1.5	Supply and installation of Electrical Distribution Board suitable for the 150m ³ /day sewage treatment plant	No.	1		
	5.3.1.6	Provide 30 Ton Crane for offloading and placing 150m ³ /day treatment plant and equipment	Sum	1		
BILL NO. 5.3 CARRIED FORWARD TO WET WORKS SUMMARY PAGE						

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BILL 5.4: SEWER PACKAGE PLANT & PARK HOME CIVILS				
PSD	5.4	EARTHWORKS				
	5.4.1	Excavation				
	5.4.1.1	a) Excavating soft material situated within the following successive depth ranges:				
	5.4.1.2	i) 0 m up to 2 m	m ³	220.0		
8.3.4	5.4.1.3	Backfill to excavations utilising				
	5.4.1.4	b) Imported material	m ³	930.0		
8.4	5.4.1.5	Foundation fill consisting of:				
	5.4.1.6	a) Compacted G5 material (compacted to 95 Mod)	m ³	145.2		
1200 G	5.4.2	CONCRETE FOR STRUCTURES				
8.2.1	5.4.2.1	Scheduled formwork for				
	5.4.2.2	a) Package Plant	m ²	17.40		
	5.4.2.3	b) Park home	m ²	10.20		
8.3.1	5.4.2.4	Steel Reinforcement for				
	5.4.2.5	ii) High-yield-stress-steel bars				
	5.4.2.6	a) Package Plant	t	5.9		
		b) Park home	t	2.0		
8.4.3	5.4.2.7	Cast in situ concrete:				
	5.4.2.8	Class 30/19 in:				
(a)	5.4.2.9	150mm Thick Package plant plinth	m ³	59.40		
(b)	5.4.2.10	150mm Thick Storage tank plinth	m ³	5.94		
(c)	5.4.2.11	150mm Thick Park home plinth	m ³	35.64		
(d)	5.4.2.11.1	Ref 245 Mesh	m ²	336.60		
PSG 8.4.3	5.4.2.12.	Curing of concrete				
(a)	5.4.2.13	Approved water based low viscosity clear curing compound				
	5.4.2.14	Package plant plinth	m ²	162.00		
(b)	5.4.2.15	Storage tank plinth	m ²	18.00		
(c)	5.4.2.16	Park home plinth	m ²	162.00		
PSA 8.5	5.4.3	TESTING MATERIALS AND WORKMANSHIP				
	5.4.3.1	(a) Other special tests requested by the engineer	Prov Sum	1.00	105 000.00	R 105 000.00
	5.4.3.2	(b) Handling cost and profit in respect of-item above	%	105 000.00		
PP 22.4	5.4.4	RELOCATION OF PARK HOME				
	5.4.4.1	Relocation of Park Home (including sewer, water and electrical connec	Sum	1		
		CARRIED FORWARD				

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	5.4	BROUGHT FORWARD				
1200MF	5.4.5	ACCESS ROAD TO PACKAGE PLANT				
PSMF	5.4.5.1	Clear trees, shrubs and construct 1000m x 5m gravel access road to package plant	m ²	550		
8.3.2	5.4.5.2	Construct base with gravel material from borrow pits				
	5.4.5.2.1	(a) excavate from designated excavations, select, and stockpile for base	m ³	150.0		
	5.4.5.3	(b) Construct the base with material from the stockpile and compact to 98% MOD AASHTO in layers of 200mm				
	5.4.5.4	Gravel Material	m ³	165.00		
	5.4.5.5	Three-roller-passes compaction:				
	5.4.5.6	(a) Vibratory roller	m ²	550.0		
BILL NO. 5.4 CARRIED FORWARD TO WET WORKS SUMMARY PAGE						

PAYMENT REFERS TO	ITEM NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		BIIL 5.5 WATER				
SANS 1200 DB	5.5	EARTHWORKS				
8.3.2	5.5.1	Excavation				
	5.5.1.1	Excavate in all materials, backfill, and dispose of surplus material for trenches up to 1.5m depth, for pipes:				
	5.5.1.2	Over 0.0m and up to 1.5m	m	250		
	5.5.1.3	b) Extra over item a) above for: Intermediate excavation	m ³	8		
		hard rock excavation	m ³	5		
SANS 1200 LB	5.5.2	BEDDING (PIPES)				
8.2.2	5.5.2.1	Available from trench within 0.5km (provisional)				
	5.5.2.2	a) selected granular material	m ³	25		
	5.5.2.3	b) selected fill material	m ³	20		
8.2.2.3	5.5.2.4	Supply only of bedding by importation from commercial source				
	5.5.2.5	a) selected granular material	m ³	20		
	5.5.2.6	b) selected fill material	m ³	15		
SANS 1200 L	5.5.3	MEDIUM PRESSURE PIPELINES				
8.2.1	5.5.3.1	Supply, lay and bed on Class C bedding pipes complete withcouplings				
	5.5.3.2	uPVC pipes, class 12 ,: Supply, handle, lay, and bed Joint with spigot and socket couplings, test,and disinfect (potable water pipeline)				
		50mm diameter	m	250		
8.2.2	5.5.3.3	Extra over 8.2.1 for the supplying, laying, and bedding of specials complete with couplings				
	5.5.3.4	Tees:				
	5.5.3.5	50mm equal tee				
	5.5.3.6	reducing tee	No	1		
	5.5.3.7	scour tee	No	1		
	5.5.3.8	Bends:				
	5.5.3.9	90 degree				
	5.5.3.10	50mm diameter	No	5		
	5.5.3.11	Reducers:				
	5.5.3.12	>50mm	No	1		
	5.5.3.13	End caps:				
	5.5.3.14	50mm diameter	No	1		
8.2.11	5.5.3.15	a) Anchor/Thrust blocks and pedestals complete to the drawing details for:				
	5.5.3.16	Tees				
	5.5.3.17	50mm diameter	No	5		
	5.5.3.18	Bends				
	5.5.3.19	90 degree for:				
	5.5.3.20	50mm diameter	No	5		
8.2.12	5.5.3.21	Supply and install Pillar taps complete with connections	No	3		
PSLD 9	5.5.4	IRRIGATION				
	5.5.4.1	Supply, lay and bed irrigation garden system on Class C bedding pipes complete with couplings				
a)	5.5.4.2	25mm HdpeT connector	No	10		
b)	5.5.4.3	25mm Hdpe pipe	m	500		
c)	5.5.4.4	Garden Impact sprinkler	No	15		
d)	5.5.4.5	50 x 25 Hdpe reducer	No	15		
e)	5.5.4.6	25mm Hdpe hdpe ball valve	No	15		
BILL NO. 5.5 CARRIED FORWARD TO WET WORKS SUMMARY PAGE						

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

PAFURI LAND PORT OF ENTRY: SUPPLY AND INSTALLATION OF SOLAR PANELS

SCHEDULE C.2.2.5 : WET WORKS

FINAL SUMMARY

BILL NO	FINAL SUMMARY	PAGE NO.	AMOUNT
5.1	SITE CLEARANCE	34	
5.2	SEWER	38	
5.3	SEWER PACKAGE TREATMENT PLANT EQUIPMENT	39	
5.4	SEWER PACKAGE TREATMENT PLANT & PARK HOME CIVIL WORKS	42	
5.5	WATER	43	
TOTAL WET WORKS (EXCLUDING VAT) CARRIED FORWARD TO C.2.2.8. CALCULATION OF TENDER SUM			

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

PAFURI LAND PORT OF ENTRY (LPOE): SUPPLY AND INSTALLATION OF SOLAR PANEL AND WASTE WATER FACILITY

BILL OF QUANTITIES

NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE C.2.2.6 : PROVISIONAL SUMS

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>PROVISIONAL SUMS</u>				
	<u>As as per the Manual for Consultant Quantity Surveyors:</u>				
	<u>Provisional sums and prime cost items</u>				
	Only with the prior approval of the departmental project manager and after consultation with the departmental quantity surveyor, may a provisional sum or a prime cost (PC) item be inserted in the bills of quantities. For ease of reference all provisional sums are to be kept in a separate section in the bills of quantities.				
	<u>Contingency amount</u>				
	No contingency amount may be included in the bills of quantities.				
	<u>Budgetary allowances</u>				
	No budgetary allowances may be included in the bills of quantities. All work must be measured out in detail. Work for which limited information or details are available must be measured provisionally.				
	<u>THE FOLLOWING ARE SOME PROVISIONAL SUMS THAT MAY BE ALLOWED IN THE BILLS OF QUANTITIES TAKING INTO ACCOUNT THE ABOVE NOTES.</u>				
	<u>COMMUNITY LIASON OFFICER (CLO)</u>				
6.1.1	Provide the sum of R144 000,00 (one Hundred And forty four Thousand Rand) for the community liaison officer for the construction period of 12 months	PS	1	R144 000	R144 000
6.1.2	Profit	%	5	R144 000	R7 200
6.1.3	Attendance	%	5	R144 000	R7 200
	<u>CLERK OF WORKS</u>				
6.2.1	Provide the sum of R420 000,00 (Four Hundred And Twenty Thousand Rand) for the clerk of works for the construction period of 12 months	PS	1	R420 000	R420 000
6.2.2	Profit	%	5	R420 000	R21 000
6.2.3	Attendance	%	5	R420 000	R21 000
	PROVISIONAL SUMS CARRIED FORWARD TO C.2.2.8. CALCULATION OF TENDER SUM				R620 400

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

PAFURI LAND PORT OF ENTRY (LPOE): SUPPLY AND INSTALLATION OF SOLAR PANEL AND WASTE WATER FACILITY

BILL OF QUANTITIES

NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE C.2.2.7 : EXPANDED PUBLIC WORKS PROGRAMME

Item	Description	Unit	Rate %	Amount
	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.			
7.1.1	MINIMUM 30% SUB-CONTRACTING			
7.1.1.1	Provision is made for 30% subcontracting to SMMEs in the execution of this project as described in PG-01.1 (EC) / PG-01.2 (EC) SCOPE OF WORKS C3.7.1. The 7.5% is the contractors allowance for the P&G's for the 30% 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	8%	1 754 267
7.1.1.2	Allowance for profit all inclusive of associated costs to the contractor for implementation.	%	5%	87 713
7.1.1.3	Allowance for attendance all inclusive of associated costs to the contractor for implementation.	%	5%	87 713
				1 929 694
7.1.2	MINIMUM TARGETED LOCAL BUILDING MATERIAL MANUFACTURERS			
7.1.2.1	Provision is made for the Minimum Targeted Local Building Material Manufacturers CPG in the execution of this project as described in PG-01.1 (EC) / PG-01.2 (EC) SCOPE OF WORKS C3.7.2. Allowance for monitoring and monthly reporting on material purchased from Local Building Material Manufacturers by main contractor and subcontractors based on determination by PQS taking into account specific project variables	PS	5%	150 000
7.1.2.2	Allowance for profit and attendance, all inclusive of associated costs to the contractor for implementation.	%	5%	7 500
7.1.2.3	Allowance for attendance all inclusive of associated costs to the contractor for implementation.	%	5%	7 500
				165 000
7.1.3	MINIMUM TARGETED LOCAL BUILDING MATERIAL SUPPLIERS			
7.1.3.1	Provision is made for the Minimum Targeted Local Building Material Suppliers CPG in the execution of this project as described in PG-01.1 (EC) / PG-01.2 (EC) SCOPE OF WORKS C3.7.3. Allowance for monitoring and monthly reporting on material purchased from Local Building Material Suppliers by main contractor and subcontractors based on determination by PQS taking into account specific project variables	PS	5%	150 000
7.1.3.2	Allowance for profit all inclusive of associated costs to the contractor for implementation.	%	5%	7 500
7.1.3.3	Allowance for attendance all inclusive of associated costs to the contractor for implementation.	%	5%	7 500
				165 000
CARRIED FORWARD				2 259 694

Item	Description	Unit	Rate %	Amount
	BROUGHT FORWARD			2 259 694
7.1.4	MINIMUM TARGETED LOCAL LABOUR SKILLS DEVELOPMENT			
7.1.4.1	Provision is made for the Minimum Targeted Local Labour Skills Development CPG in the execution of this project as described in PG-01.1 (EC) / PG-01.2 (EC) SCOPE OF WORKS C3.7.4. This allowance is for the cost for a suitably qualified and experienced training service provider appointed by the main contractor including monitoring and monthly reporting.			350 000
7.1.4.2	Allowance for profit all inclusive of associated costs to the contractor for implementation.	%	5%	17 500
7.1.4.3	Allowance for attendance all inclusive of associated costs to the contractor for implementation.	%	5%	17 500
7.1.5	MINIMUM TARGETED ENTERPRISE DEVELOPMENT			385 000
7.1.51	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 provider and training of the beneficiary enterprises including monitoring and monthly reporting.	PS		755 000
7.1.5.2	Allowance for profit all inclusive of associated costs to the contractor for implementation.	%	5%	37 750
7.1.5.3	Allowance for attendance all inclusive of associated costs to the contractor for implementation.	%	5%	37 750
7.1.6	MINIMUM TARGETED SKILLS DEVELOPMENT GOALS			830 500
7.1.6.1	A provisional amount has been allowed for the Minimum Targeted Development CPG in the execution of this project as described in PG-01.1 (EC) / PG-01.2 (EC) SCOPE OF WORKS C3.7.6. • stipends payable to the beneficiaries	PS	1%	208 152
7.1.6.2	Allowance for profit all inclusive of associated costs to the contractor for implementation.	%	5%	10 408
7.1.6.3	Allowance for attendance all inclusive of associated costs to the contractor for implementation.	%	5%	10 408
7.1.7	NATIONAL YOUTH SERVICE TRAINING AND DEVELOPMENT PROGRAMME			228 967
7.1.7.1	Refer to separate EPWP-NYS BOQ			825 240
7.1.7.2	Allowance for monthly reporting based on the implementation of the EPWP-NYS as per the specifications and EPWP-NYS BOQ all inclusive of associated costs to the contractor.	%	5%	41 262
7.1.8	LABOUR INTENSIVE PARTICIPATION GOAL			866 502
7.1.8.1	Labour Intensive Participation Goal - Allowance for monthly reporting of labour intensive works by main contractor 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 based on determination by PQS taking into account specific project variables			162 000
7.1.8.2	Allowance for profit all inclusive of associated costs to the contractor for implementation.	%	5%	8 100
				170 100
	CARRIED FORWARD TO CPG SUMMARY			4 740 763

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

PAFURI LAND PORT OF ENTRY (LPOE): SUPPLY AND INSTALLATION OF SOLAR PANEL AND WASTE WATER FACILITY

BILL OF QUANTITIES

NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE C.2.2.7 : ENTERPRISE DEVELOPMENT

Item	Description	Unit	Rate	Quantity	Amount
7.2.1	Enterprise Development				
7.2.2	Appointment of training co-ordinator (As determined by the PQS)	Per Quarter	R 45 000.00	4	R 180 000.00
7.2.3	Appointment of Mentor /Training Service provider (As determined by the PQS)	Per Quarter	R 120 000.00	4	R 480 000.00
7.2.4	Needs Analysis and Enterprise Development Plan per Targeted Enterprise (As determined by the PQS)	No.	R 5 000.00	2	R 10 000.00
7.2.5	Monitoring and Interim reporting per targeted enterprise (As determined by the PQS)	Per Quarter	R 20 000.00	4	R 80 000.00
7.2.6	Project Completion report per Targeted Enterprise (As determined by the PQS)	No.	R 5 000.00	1	R 5 000.00
	CARRIED FORWARD TO SCHEDULE C.2.2.7 : CPG BOQ				R 755 000.00

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

PAFURI LAND PORT OF ENTRY (LPOE): SUPPLY AND INSTALLATION OF SOLAR PANEL AND WASTE WATER FACILITY

BILL OF QUANTITIES

NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK

SCHEDULE C.2.2.7 : EXPANDED PUBLIC WORKS PROGRAMME

Item	Description	Unit	Rate	Quantity	Amount
7.3	<u>SECTION NO C.2.2.7</u> <u>BILL NO C.2.2.7</u> <u>EMPLOYMENT AND TRAINING OF LABOUR ON THE EPWP-NYS INFRASTRUCTURE PROJECTS</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 Note: The contractor shall test the market by submitting 3 quotes before appointment of the training provider				
7.3.1	<u>TRAINING OF YOUTH WORKERS</u> <u>(TARGET: 10 YOUTH WORKERS)</u>				
	<u>Orientation, Life skills development and technical training:</u>				
7.3.1.1	Orientation and Life skills development training for youth workers for an average of 10 days per youth worker (ref. SL 11.01.01)	PC		Sum	31 701.38
7.3.1.2	Technical skills training for youth workers for an average of 80 days per youth worker (ref. SL 11.01.02)	PC		Sum	285 312.45
7.3.1.3	Provide Medical Surveillance	PC		Sum	7 925.36
	The above items are only applicable if NYDA do not fund the specific training.				
7.3.1.4	Payment Reduction due to not meeting the training target (ref. SL 11.03)	Youth-worker	-R 2 500.00		
7.3.1.5	Profit and attendance on condition that services and cost has been incurred (on items 200.01.01 and 200.01.02 above)	%	R 317 013.83	10%	31 701.38
7.3.2	<u>TRAVELING DURING ON-SITE TRAINING:</u>				
7.3.2.1	<u>Practical Work based Experiential training for 10 days each</u> <u>(ref. SL 11.02.01)</u>				
	.01 Traveling (based on R40 per day return trip/youth worker)	PC		Sum	83 691.65
	.02 Profit and attendance on condition that services and cost has been incurred (on item .01 above)	%	R 83 691.65	10%	8369.17
7.3.3	<u>EMPLOYMENT OF YOUTH WORKERS</u>				
7.3.3.1	Employment of youth workers The unit of measurement shall be the number of youth workers at the labour rate of R 121.28 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 9 months appointment for youth workers	PC		Sum	240 134.40
7.3.3.2	Profit and attendance on condition that services and cost has been incurred (ref. SL 11.04.02)	%	R 240 134.40	10%	24 013.44
	CARRIED FORWARD				712 849.23

Item	Description	Unit	Rate	Quantity	Amount
	BROUGHT FORWARD				712 849.23
7.3.4	<u>PROVISION OF EPWP DESIGNED OVERALLS AND HARD HATS TO YOUTH WORKERS</u>				
7.3.4.1	Supply EPWP branded 2 x overalls, safety boots and 1 x EPWP branded hard hat to youth workers	PC		Sum	23 776.04
7.3.4.2	Profit and attendance on condition that services and cost has been incurred (ref. SL 11.05.02)	%	23776	10%	2 377.60
7.3.5	<u>PROVISION OF BASIC TOOLS FOR YOUTH WORKERS</u>				
7.3.5.1	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 11.06.01)	PC		Sum	28 531.24
7.3.5.2	Profit and attendance on condition that services and cost has been incurred (ref. SL 11.06.02)	%	28531	10%	2 853.12
7.3.6	<u>APPOINTMENT OF YOUTH TRAINING COORDINATOR (TEAM LEADER/S)</u>				
7.3.61	Appointment of Youth Team Leader/s for the duration of the contract (ref. SL 11.07.01)	PC		Sum	49 500
7.3.7	LIAISON WITH SERVICE PROVIDER (ref. SL 11.08)	hours	100	10.00	1 000
7.3.8	<u>LOGISTICS FOR EXIT WORKSHOPS</u>				
7.3.8.1	Provide logistic items for exit workshop (Catering, Orange Golf T-Shirts, Venue Hire and Sound System).	PC	1	4353.12	4 353.12
	Carried to Summary of CPG's Schedule C.2.2.7				825 240.36

SCHEDULE C.2.2.7 : CPG SUMMARY OF CPG BOQ

Item	CPG Description	Unit	Rate / %	Amount
1	30% sub-contracting (including P&A)		7.50%	1 929 694
2	Local Manufacturers (including P&A)		5%	165 000
3	Local Suppliers (including P&A)		5%	165 000
4	Local Labour Skills Development CPG (including P&A)			385 000
5	Enterprise Development (including P&A)			830 500
6	Skills Development (including P&A)	GB	0.50%	228 967
7	NYS (Mini Bill + P&A)			866 502
8	Labour Intensive Participation Goal - Allowance for monthly reporting of labour intensive works by main contractor based on determination by PQS taking into account specific project variables (including P)			170 100
TOTAL CPG's CARRIED FORWARD TO C.2.2.8. CALCULATION OF TENDER SUM				4 740 763

C.2.2.8. CALCULATION OF TENDER SUM**PAFURI LAND PORT OF ENTRY (LPOE): SUPPLY AND INSTALLATION OF SOLAR PANEL AND WASTE WATER FACILITY****NB: TENDERERS MUST COMPLETE THE BILL OF QUANTITIES IN BLACK INK**

ITEM	DESCRIPTION	TENDER AMOUNT
1.	C.2.2.1 Preliminary and General	
2.	C.2.2.2 Solar Installation	
3.	C.2.2.3 Electrical Installation	
4.	C.2.2.4 Building Works	
5.	C.2.2.5 Wet Works (Civil)	
6.	Sub-total	
7.	C.2.2.6 Provisional Sums	620 400.00
8.	C.2.2.7 Allowance for CPG	4 740 763.12
9.	Sub-total	
10.	VAT 15% The tenderer shall add 15% of the sub-total for value-added tax	
11.	TOTAL TENDER SUM CARRIED TO FORM OF OFFER (PART C1.1.)	