CONTRACT

PART C2: PRICING DATA

ANNEXURES TO C2.2 – Bills of Quantities

ANNEXURE C2.2-A Electrical Installation

Tenderers are referred to the Scope of Work contained in Annexure C3-A. The Electrical Installation Bill of Quantities must be priced in conjunction with, and read together with, the said Scope of Work. Tenderers shall be deemed to have acquainted themselves with the full requirements of Annexure C3-A, and no claims arising from a failure to do so will be entertained

GENERAL NOTES

1. These schedules of quantities contain sequently numbered pages as indicated in the contents list. Tenderers are required to check that the pages in their schedules of quantities are complete. If any pages are duplicated or omitted, or if any quantity or typing is unclear or if the schedules of quantities contain any obvious errors, the tenderer shall immediately notify the engineer so that the problem may be rectified. No responsibility for any errors arising from any of the above shall be accepted by the engineer.

2. The schedules of quantities form part of and shall be read in conjunction with the specification, which contains full description of the work required to be performed and the materials and equipment to be supplied and used in the execution of the works. Tenderers shall refer to the specification for the full meaning and description of work to be executed and materials and equipment to be supplied or used in the execution of the work.

3. Tenders shall be submitted with schedules of quantities completed in full. Non or partial completion of the schedules of quantities shall render tenders liable for disqualification.

4. The total tender price as carried forward to the tender form, after correction for arithmetic extension errors, etc shall be the contract price as awarded to the successful tenderer. Tenderers are requested to check multiplication and addition of the schedules of quantities. The rate submitted shall be regarded as the price offered per item.

5. No changes, additions or omissions to the contents of the schedules of quantities shall be permitted. If any changes, additions or omissions are made these shall not be recognised and the original wording of the schedules of quantities shall apply.

6. The priced schedules of quantities of tender shall be checked by the engineer. The engineer reserves the right to request adjustments to one or more individual tender prices and to rectify contradictions and thereby alter the total tender price as submitted. The acceptance of this tender does not preclude the engineer from querying or requesting of the contractor to adjust the rates at any stage during the contract period or any extension thereto.

7. The responsibility of the accuracy of the quantities included in the schedules, remains with the person who prepared the schedules. The tenderer is relieved from the responsibility of the measurement of quantities at tender stage and the tender amounts shall be for the quantities as listed in the schedules. It is however expected from the tenderer to include for minor construction items such as would be required for the complete execution of works in accordance with the specification.

8. The successful tenderer and the client or his agent may agree that the total of an individual list or lists, inclusive of any variations such as additions to or omissions from the list, form an accurate description of the work required for the execution of a part, or the whole of the works and as such shall form the total final payment of a part or the whole of the works. The agreed total for one or more lists, inclusive of any agreed variations to the list, shall be considered a lump sum total for the part or whole of the works with any subsequent additions to and omissions from part or whole of the works calculated on the basis of the rates as tendered.
9. The quantities in these schedules of quantities shall not be used for the ordering of materials.

10. Changes in the scope of works included in the schedule of quantities shall be permitted and shall be measured and priced at the tariffs as included in the schedules of quantities and shall form an addition to or omission from the total of the schedule of quantities. Any changes not covered by any rates in the

schedules of quantities shall be agreed and priced as non schedule items in accordance with the conditions of contract.

11. The extent and value of variations shall be in accordance with the conditions of contract. Variations to the works prior to the execution thereof shall be priced as above. Variations to work already executed shall not necessarily be priced in accordance with the schedule of quantities and shall be judged individually on merit. Except where the separate rate for the material and labour components of any item is specifically called for, the unit price of such item shall be deemed to include the supply and installation of that item.

12. The description of any items shall, except where otherwise specified, allow for the purchase, delivery, off-loading, storage, packing, lifting, placing, positioning and fixing in position, cutting and wastage, dies and patterns, models and equipment, temporary work, return of packing material, fixing costs, profit or other obligations of the contract arising out of the conditions of contract.

13. All items prices shall exclude VAT but include any other tax or levy as applicable.

14. All items are measured to the net final quantity as indicated on the drawings with the completed work in the position as indicated on the drawing. All prices and rates shall allow for wastage for whatever reason, irrespective of any other standard measurement which may be currently used elsewhere.

15. Should the contractor identify any additional issues or items which in his opinion are necessary for the complete and proper execution of the works, he shall identify such items in a covering letter attached to his tender and submit rates for these items. Mistakes in the physical measurement of items in the schedules of quantities shall be rectified but no claim shall be considered for the non-measurement of doubtful or minor items or claims resulting of criticism of method of measurement used or descriptions given. The priced schedule of quantities shall not be adjusted on the grounds of the items which in the opinion of the tenderer should have been brought into account unless so detailed in the accompanying letter.

16. The schedule of quantities shall be adjusted to reflect the quantities of materials used on completion of whole or part of the works as a result of remeasurement, qualification or variations. The remeasured quantities shall form the basis for the calculation of payment certificates. The schedules of quantities are not intended for the ordering of materials, etc. and the contractor is advised to extract the quantities for the ordering of materials directly from the drawings and specification. Any order placed directly from the schedules of quantities shall be solely at the contractor's risk.

17. The unit rates as entered in the schedule of quantities with the exclusion of dayworks items shall in all cases include any present and applicable sales tax or similar statutory duties.

18. DAYWORKS

18.1 The quantities and rates for daywork shall form part of the tender price. The tenderer's attention is drawn to the fact that these quantities shall be considered to be preliminary quantities. Payments against dayworks shall only be made as and when required and a written instruction for the work to be performed on dayworks is issued by the engineer.

18.2 LABOUR

The unit rates for labour shall allow for all payments and obligations in terms of the various labour agreements in force during the period of contract, as well as any or all transport allowances and all transport costs, lodging or site allowances and any other remuneration or allowances payable to the workers at tender submission date.

The rates for labour and dayworks shall be applied to the time worked and shall include for labour costs, supervision, overheads, transport, profit, full levies, bonuses, leave payments and shall in all cases exclude VAT but include any other present and applicable statutory duties and levies not covered under preliminary and general costs.

Time sheets with the time spent during each day on the specific day of work undertaken in dayworks including the names of the workmen and the material used in execution of dayworks shall be submitted weekly to the engineer or his representative, as agreed and in accordance with the conditions of contract.

18.3 MATERIALS

The cost of materials in dayworks shall be based on the rates in the schedules of quantities and where the suitable rates for these materials do not exist the costs shall be based on the nett costs which shall be substantiated by means of invoices.

The unit rates for materials as indicated shall be the nett rates after deduction of applicable discounts. VAT shall be excluded but any other applicable levies shall be included. Quantities of material used shall be inclusive of any reasonable and unavoidable wastage of material.

18.4 PERCENTAGE MARK-UP

The percentage mark-up which is added to labour and materials only, shall be considered to cover all costs inclusive of contractor's profit, administration, insurance, establishment, supervision (with the exception of time spent by the applicable artisan, team leader, or leader artisan as allowed by the engineer), the use of hand tools and all other non-mechanical equipment and any other costs already covered in the preliminary and general section of schedules.

18.5 MECHANICAL EQUIPMENT AND MACHINERY

The rates submitted for mechanical machinery and equipment shall include for the hiring or use of machinery exclusive of VAT but inclusive of any other applicable taxes, the machine operators time (exclusive of time spent by helpers and artisans, separately detailed), insurance, consumables, fuel, lubrication, repairing, service and maintenance, transport to and from the site (unless specifically brought to site on the instruction and with the agreement of the engineer) and all other overheads and profit.

18.6 TOWING AND HAULAGE

The rates submitted for towing and haulage shall include for the hire or use of the vehicle, drivers time, fuel and oil, repair, service, maintenance, insurance and any applicable taxes or levies excluding VAT and shall include for all overheads and profits. Towing shall only be paid for vehicles used exclusively for dayworks and only with the prior approval of the engineer.

18.7 EQUIPMENT

The rates for non-mechanical equipment and supplies shall include for usage, wear, maintenance, repair and/or replacement to and from the site and all landing and overhead costs and profit. Only equipment specifically brought to site for the execution of dayworks and used exclusively on dayworks shall be paid.

18.8 STANDING/WAITING TIME

Standing time for mechanical equipment or hauling vehicles will only be paid in periods of inactivity during normal working hours while it is necessary to be fully prepared for the execution of the specific daywork.

18.9 UNSCHEDULED ITEMS

Prior to the application of any labour, equipment, material of any nature to dayworks the contractor shall be required to submit rates to the engineer for approval of any unscheduled items.

PRELIMINARY AND GENERAL

18.10 Tenderers should place preliminary and general under one or all of the following groups:

A. a fixed amount
B. an amount adjustable in proportion with the final contract period in comparison with the originally specified contract period.

All sub-divisions of preliminary and general of the above categories shall be realistic and the contractor may be requested to justify the cost allocations submitted. Attention is specifically drawn to the rights reserved in accordance with clause 6.

18.11 GENERAL ALLOWANCES

Items relating to the entire project are prices on a lump sum basis and including the following:

a CONDITIONS OF CONTRACT

Allow for all items and contingencies in the conditions of contract and special conditions of contract which are not specifically allowed for elsewhere.

b. INSURANCE

Allow for the payment of all premiums of all insurance and guarantees as required by the contract documents with the exception of any items specifically allowed for and priced elsewhere.

c. ESTABLISHMENT

Allow for establishment on site.

d. CLEANING

Allow for the cleaning of the external services of buildings and structures, removal of marks on tar surfaces, removing of stains, cleaning of paving and floors, etc., removal of refuse and rubble and all other work required to leave the works clean and in a complete condition.

e. SAMPLES

Allow for the supply of samples of materials as may be requested by the engineer and for the erection of test panels as described in the standard and project specifications.

18.12 ESTABLISHMENT ON SITE

Items shall be priced on the basis of initial erection and use and maintenance and disassembly and removal on completion of contract which will include the following:

a. FENCING AND PROTECTION

Allow for the protection and fencing between the site, adjacent properties and public areas including the supply and installation of all necessary fences and protection, scaffolding, supports, protective screens, barriers, fences, false pavement, temporary curbs including the modifications and adjustments required from time to time and for the procurements of all necessary permits and the payment of all deposits, rents, etc. during the contract period.

b. SITE OFFICE STORAGE, ACCOMMODATION, ETC.

Allow all necessary site offices, temporary workshops, living accommodations, mess facilities, storage areas, cleaning and recreation facilities, etc., including suitable furniture, fences for temporary camps and any necessary moving of facilities during the course of the

project. (Lighting and cleaning etc shall be allowed for elsewhere).

c. SITE FACILITIES:

No site facilities are required by the engineer unless otherwise specified in the project specification.

18.13 SITE ADMINISTRATIVE COSTS

The following items shall be priced on the assumption that they shall mainly be proportional to the full contract period and will include the following:

A SITE PERSONNEL SALARIES AND LOANS

Allow for all salaries, loans and related costs in respect of supervisory and other unproductive personnel including general foreman, site engineers, site surveyors, section foreman, costing clerks, time clerks, office and store personnel, night watch, etc.

b. TELEPHONE

Allow for all necessary telephone services including radio and telephone intercommunication systems and for the payment of all installation and connection fees, rental, telephone call unit costs and any other costs for the moving of the telephone as necessary and for the removal of system at contract completion.

c. GENERAL

Allow for the necessary stationary, first aid stores, office cleaning including materials and any other necessary expenses.

18.14 SITE ON COSTS AND EXPENSES

Items shall be priced relating to specific overheads which may be continuous, intermittent or of varying duration including the following:

a. MECHANICAL MACHINERY AND EQUIPMENT

Allow for all costs including the erection, installation, repairing, maintenance, accessories, fuel, lubrication, operators, etc. And any movement of machinery and the removal of machinery on contract completion (transport to and from site shall be allowed in sub-clause (d) below).

b. SCAFFOLDING

Allow for all scaffolding, supports, boards, etc., for internal or external use, inclusive of erection, hiring, repair and replacement, etc. and any requirements on site and the eventual demounting and removal thereof (transport to and from site shall be allowed in sub-clause (d) below).

c. NON MECHANICAL EQUIPMENT AND MACHINERY

Allow for non-mechanical and contractors machinery and also for any loose tools, consumables, protective clothing, etc. (Transport to and from site will be allowed in the sub-clause (d) below).

d. TRANSPORT

Allow for all transport related to the works to or from the site including the transport of employees, materials, machinery and equipment (excluding the removal of rubbish and rubble).

e. SAFETY MEASURES

Allow the necessary safety measures for the protection of the public and workers against damage or injury, including the provision of temporary safety railings or barriers and warning boards, etc.

f. ATTENDANCE ON ENGINEER

Allow for the provision of all attendance (labourers or any other attendance) required by the engineer or any other person or persons nominated by the engineer for the purposes of the preparation of records or measurement of any of the details of the work executed and for the exposing work for inspection or any similar obligation of task, for the preparation of an account and finalising of design details on the site.

g. RUBBISH REMOVAL

Allow for the cleaning of all rubbish and off-cuts as required from time to time (final cleaning shall be allowed under sub-clause (d) in 17.2.

h. PROTECTION OF THE WORKS

Allow for the covering and protection of the section of the work liable to be damaged by any cause and for the removal of coverings at completion of the contract.

i. ELECTRICAL AND WATER COSTS
Allow for all cost in respect of electricity and water usage required for the execution of the works, whether this be supplied by means of a main connection supply or any means.

19. All provisional amounts shall be expended on written instruction by the engineer and the remaining balance of provisional amounts shall be omitted from the contract sum.

20. All items described as provisional shall be measured and executed and shall be paid in accordance with the prices in the Schedule of Quantities and any unused amounts shall be deducted from the final contract value. Items designated as provisional shall be undertaken only on written instruction from the engineer.

21. All rates shall allow for the testing and commissioning procedures required for equipment and systems.

22. All quantities are net except where otherwise specified and tenderers shall make allowances in their rates for all wastage.

23. 5% has been added to all underground cable lengths to take into account the effect of gradient and waviness and weaving around agreed obstacles. One joint per 300m of cable allowed for.

24. The purchasing and fitting of permanent locks for kiosks, transformers etc shall be included in the rates for these items.

25. Earth conductors include running joints.

26. Excavation classifications as per SABS 1200. Cable trenching and all other excavations shall include stabilisation, keeping the trenches free of wind-blown sand, backfilling and compacting in layers and the removal, spreading and compacting of excess soil.

27. Cable marker installation includes excavation to install cable marker.

28. Workshop drawings shall be submitted in quadruplicate, delivered to the engineer's office.

29. As-built drawings and test reports and records shall be delivered to the engineer's office.

30. Samples shall be delivered to the engineer's office.

31. Terminations and joints are measured per cable end & per joint.

Item	Description	Amount
	SUMMARY	
1	Bill no 1 : P&G	
2	Bill no 2 : Medium Voltage Supply	
3	Bill no 3 : Low Voltage Supply	
4	Bill no 4 : Juice Plant Lighting and Power	
5	Bill no 5 : Office/Ablutions: Lighting, Power and IT	
6	Bill no 6 : Provisional Sums / Contingecy Allowance	R 660 000,00
7	Bill no 7 : Provisional Dayworks	
SUBTOTAL		
VAT @ 15%		
TOTAL		

Item	Description	Unit	Quantity	Rate	Amount
1	BILL NO.1 : PRELIMINARY & GENERAL				
1.1	Allow for PRELIMINARY & GENERAL Costs : (Site establishment and overheads)	-	Sum	-	
1.2	Safety plan and measures	-	Sum	-	
1.3	Scanning for and marking out of existing 11kV electricity supply cables	-	Sum	-	
1.4	OTHER : To be specified by the Tenderer				
1.4.1					
1.4.2					
1.4.3					
1.4.4					
SUBTOTAL : Carried forward to Summary					R -

Item	Description	Unit	Quantity	Rate	Amount
2	BILL NO.2 : MEDIUM VOLTAGE SUPPLY				
2.1	CABLES Supply, deliver and install the following XLPE/SWA aluminium cables				
2.1.1	95mm² Aluminium XLPE 3-core cable				
	MATERIAL :	m	260		
	LABOUR :	m	260		
2.1.2	Trenching in pickable earth, backfill, and compacting in layers including soft soil fill and danger tape				
	MATERIAL :	m	250		
	LABOUR :	m	250		
2.1.3	Trenching in non-pickable earth, backfill, and compacting in layers including soft soil fill and danger tape				
	MATERIAL :	m	50		
	LABOUR :	m	50		
2.2	CABLE TERMINATIONS Cable glands including the terminations, making off lugs, etc. of the cable				
2.2.1	95mm² Aluminium XLPE 3-core cable				
	MATERIAL :	No.	3		
	LABOUR :	No.	3		
2.3	CABLE JOINTS Joining of existing Municipal electricity supply cables with new 95mm² Aluminium XLPE 3-core cable				
2.3.1	95mm² Aluminium XLPE 3-core cable				
	MATERIAL :	No.	2		
	LABOUR :	No.	2		
2.4	MEDIUM VOLTAGE EQUIPMENT Supply, rigging, and istallation of 11kV equipment				
2.4.1	11kV Metering unit in outdoor-rated kiosk complete with meter to electricity supply authority specifications and protection relay as indicated in drawing CE0770/D51				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		

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Item	Description	Unit	Quantity	Rate	Amount
2.4.2	1000kVA 11kV/400V Outdoor-rated miniature substation				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
2.4.3	Pre-cast concrete plinth for 2.4.1 above including supply, rigging and installation				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
2.4.4	Pre-cast concrete plinth for 2.4.2 above including supply, rigging and installation				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
2.4.5	Earthing for 2.4.1 above including 1000mm x 1000mm earth mat, bonding, testing etc.				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
2.4.6	Earthing for 2.4.2 above including 1000mm x 1000mm earth mat, bonding, testing etc.				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
2.5	TESTING				
2.5.1	Testing and commissioning of MV installation including liaison and testing with local electricity supply authority	-	Sum	-	
2.6	OTHER : To be specified by the Tenderer				
2.6.1					
2.6.2					
2.6.3					
2.6.4					
SUBTOTAL : Carried forward to Summary				R	-

Item	Description	Unit	Quantity	Rate	Amount
3	BILL NO.3 : LV SUPPLIES				
3.1	CABLES Supply, deliver and install the following PVC/PVC/SWA/PVC and XLPE/PVC/SWA/PVC cables				
3.1.1	300mm² 4-core XLPE SWA (Aluminium)				
	MATERIAL :	m	160		
	LABOUR :	m	160		
3.1.2	120mm² 4-core PVCA (Aluminium)				
	MATERIAL :	m	50		
	LABOUR :	m	50		
3.1.3	70mm² 4-core PVCA (Aluminium)				
	MATERIAL :	m	360		
	LABOUR :	m	360		
3.1.4	50mm² 4-core PVCA (Aluminium)				
	MATERIAL :	m	475		
	LABOUR :	m	475		
3.1.5	25mm² 4-core PVCA (Aluminium)				
	MATERIAL :	m	180		
	LABOUR :	m	180		
3.1.6	6mm² 4-core PVCA (Copper)				
	MATERIAL :	m	100		
	LABOUR :	m	100		
3.2	CABLE TERMINATIONS Cable glands including the terminations, making off lugs, etc. of the cable				
3.2.1	300mm² 4-core XLPE SWA (Aluminium)				
	MATERIAL :	m	8		
	LABOUR :	m	8		
3.2.2	120mm² 4-core PVCA (Aluminium)				
	MATERIAL :	m	2		
	LABOUR :	m	2		
3.2.3	70mm² 4-core PVCA (Aluminium)				
	MATERIAL :	m	14		
	LABOUR :	m	14		

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Item	Description	Unit	Quantity	Rate	Amount
3.2.4	50mm² 4-core PVCA (Aluminium)				
	MATERIAL :	m	16		
	LABOUR :	m	16		
3.2.5	25mm² 4-core PVCA (Aluminium)				
	MATERIAL :	m	4		
	LABOUR :	m	4		
3.2.6	6mm² 4-core PVCA (Copper)				
	MATERIAL :	m	2		
	LABOUR :	m	2		
3.2.7	600mm wide x 1000mm deep cable trench in hard soil with 150mm soft sand fill	m	20		
3.3	EARTHING Stranded copper earth conductors installed with cables, excluding terminations				
3.3.1	95mm² PVC BLACK EARTH (Copper)				
	MATERIAL :	m	160		
	LABOUR :	m	160		
3.3.2	70mm² BCE				
	MATERIAL :	m	310		
	LABOUR :	m	310		
3.3.3	25mm² BCE				
	MATERIAL :	m	130		
	LABOUR :	m	130		
3.3.4	16mm² BCE				
	MATERIAL :	m	285		
	LABOUR :	m	285		
3.3.5	4mm² BCE				
	MATERIAL :	m	100		
	LABOUR :	m	100		
3.3.6	Bonding of roof structure to column				
	MATERIAL :	No.	8		
	LABOUR :	No.	8		

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
3.3.7	Earthing of structure complete with 3,6m earth rod and 70mm² BCE to structure				
	MATERIAL :	No.	8		
	LABOUR :	No.	8		
3.3.8	2x2m earth mat installed 2 meter deep at MDB				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
3.3.9	Hole for a 2x2m LV earth mat 2m below ground level with 3 x 70mm² to earth in MDB room	No.	1		
3.3.10	800mm long Earth Bar mounted on insulators in MDB room				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
3.4	EARTH CONDUCTOR TERMINATIONS				
3.4.1	95mm² PVC BLACK EARTH (Copper)				
	MATERIAL :	m	4		
	LABOUR :	m	4		
3.4.2	70mm² BCE				
	MATERIAL :	m	12		
	LABOUR :	m	12		
3.4.3	25mm² BCE				
	MATERIAL :	m	4		
	LABOUR :	m	4		
3.4.4	16mm² BCE				
	MATERIAL :	m	8		
	LABOUR :	m	8		
3.4.5	4mm² BCE				
	MATERIAL :	m	2		
	LABOUR :	m	2		

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
3.5	TESTING				
3.5.1	Test and commision the installation included in this section:	-	Sum	-	
2.6	OTHER : To be specified by the Tenderer				
2.6.1					
2.6.2					
2.6.3					
2.6.4					
SUBTOTAL : Carried forward to Summary					R -

Item	Description	Unit	Quantity	Rate	Amount
4	BILL NO.4 : JUICE PLANT				
4.1	LV ELECTRICAL INSTALLATIONS : LIGHTING				
4.1.1	CONDUITS				
4.1.1.1	Conduits in ceiling space/on surface				
4.1.1.1.1	25mmØ PVC				
	MATERIAL:	m	-		Rate Only
	LABOUR:	m	-		Rate Only
4.1.1.1.2	20mmØ PVC				
	MATERIAL :	m	-		Rate Only
	LABOUR :	m	-		Rate Only
4.1.1.1.3	25mmØ Galvanized				
	MATERIAL:	m	-		Rate Only
	LABOUR:	m	-		Rate Only
4.1.1.1.4	20mmØ Galvanized				
	MATERIAL :	m	380		
	LABOUR :	m	380		
4.1.2	CONDUIT BOXES				
4.1.2.1	Outlet boxes without covers				
4.1.2.1.1	100x50x50 deep PVC in brick or concrete (Recessed)				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.2.1.2	100x50x50 deep galvanized onto brick, concrete surface or in roof space				
	MATERIAL :	No.	8		
	LABOUR :	No.	8		
4.1.2.1.3	50mmØ x 25 galvanized on trunking.				
	MATERIAL :	No.	65		
	LABOUR :	No.	65		
4.1.2.1.4	50mmØ x 25 galvanized with lid surface on concrete/steel column				
	MATERIAL :	No.	23		
	LABOUR :	No.	23		

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Item	Description	Unit	Quantity	Rate	Amount
4.1.2.1.5	100x50 surface box with lid for connecting flood lights complete with 3x20mm holes for cable glands.				
	MATERIAL :	No.	11		
	LABOUR :	No.	11		
4.1.2.1.6	P2000 Galvanised wiring trunking for lights complete with grey PVC lids, avarage 3m hangers, etc.				
	MATERIAL :	m	380		
	LABOUR :	m	380		
4.1.2.1.7	P2000 galvanised 90º Bend section				
	MATERIAL :	No.	4		
	LABOUR :	No.	4		
4.1.2.1.8	P2000 galvanised T-section				
	MATERIAL :	No.	10		
	LABOUR : ,	No.	10		
4.1.2.1.9	P2000 galvanised Cross over				
	MATERIAL :	No.	10		
	LABOUR :	No.	10		
4.1.2.1.10	P8000 galvanised trunking for supply from DB to P2000 trunking.				
	MATERIAL :	No	50		
	LABOUR :	No	50		
4.1.2.1.11	Connection between P8000 / P2000 grid.				
	MATERIAL :	No.	4		
	LABOUR :	No.	4		
4.1.2.1.12	P8000 slow bend 90º at DB.				
	MATERIAL :	No.	4		
	LABOUR :	No.	4		
4.1.2.1.13	Connection of P8000 into DB.				
	MATERIAL :	No.	2		
	LABOUR :	No.	2		
4.1.3	CONDUCTORS				
4.1.3.1	PVC insulated copper conductors drawn into conduit/trunking				
(Continued on next page)					

Item	Description	Unit	Quantity	Rate	Amount
4.1.3.1.1	2,5mm²				
	MATERIAL :	m	5510		
	LABOUR :	m	5510		
4.1.3.2	PVC insulated copper conductors terminations				
4.1.3.2.1	2,5mm²				
	MATERIAL	m	332		
	LABOUR	m	332		
4.1.4	LUMINAIRES (including Tubes & Lamps)				
4.1.4.1	Supply & Install Luminiares				
4.1.4.1.1	Type F1				
	MATERIAL :	No.	22		
	LABOUR :	No.	22		
4.1.4.1.2	Type F2				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.4.1.3	Type F3				
	MATERIAL :	No.	18		
	LABOUR :	No.	18		
4.1.4.1.4	Type F4				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
4.1.4.1.4	Type F4E				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
4.1.4.1.6	Type F5				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.4.1.6	Type F5E				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
4.1.4.1.7	Type F6				
	MATERIAL :	No.	15		
	LABOUR :	No.	15		
4.1.4.1.7	Type F6E				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.4.1.8	Type F7				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.4.1.9	Type F7E				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.4.1.10	Type F8				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.4.1.11	Type F8E				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.4.1.12	Type FL1				
	MATERIAL :	No.	11		
	LABOUR :	No.	11		
4.1.4.1.13	Type FL2				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.4.1.14	Type FL2E				
	MATERIAL :	No.	6		
	LABOUR :	No.	6		
4.1.4.1.15	Type D1				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.4.1.16	Type D2				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
4.1.4.1.17	Type B1				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.4.1.18	Type B1E				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.4.1.19	Type J1				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.4.1.20	Type E1				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.1.5	FITTINGS AND ACCESSORIES				
4.1.5.1	Surface-mounted switch units(s) with coverplate(s) (boxes measured elsewhere)				
4.1.5.1.1	16A single lever light switch weatherproof				
	MATERIAL :	No.	8		
	LABOUR :	No.	8		
4.1.5.1.2	5A sockets				
	MATERIAL :	No.	49		
	LABOUR :	No.	49		

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
4.2	LV ELECTRICAL INSTALLATIONS : POWER AND IT				
4.2.1	CONDUITS				
4.2.1.1	Conduits surface bosal				
4.2.1.1.1	25mmØ Bosal				
	MATERIAL :	m	555		
	LABOUR :	m	555		
4.2.1.1.2	20mmØ Bosal				
	MATERIAL :	m	-		Rate Only
	LABOUR :	m	-		Rate Only
4.2.1.2	Conduits surface PVC				
4.2.1.2.1	32mmØ PVC				
	MATERIAL :	m	-		Rate Only
	LABOUR :	m	-		Rate Only
4.2.1.2.2	25mmØ PVC				
	MATERIAL :	m	-		Rate Only
	LABOUR :	m	-		Rate Only
4.2.1.2.3	20mmØ PVC				
	MATERIAL :	m	-		Rate Only
	LABOUR :	m	-		Rate Only

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
4.2.1.3	Connection into trunking for SSO conduits				
4.2.1.3.1	25mmØ hole				
	MATERIAL :	No	26		
	LABOUR :	No	26		
4.2.1.3.2	20mmØ hole				
	MATERIAL :	No	-		Rate Only
	LABOUR :	No	-		Rate Only
4.2.2	CONDUIT BOXES AND ACCESSORIES				
4.2.2.1	Outlet boxes without covers				
4.2.2.1.1	100x100x50 deep bosal in brick or concrete				
	MATERIAL :	No.	13		
	LABOUR :	No.	13		
4.2.2.1.2	100x50x50 deep PVC in brick or concrete				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.2.2.1.3	100x100x50 deep bosal surface onto brick, concrete surface or in roof space				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.2.2.1.4	50mmØ x 25 surface bosal onto brick, concrete surface or in roof space				
	MATERIAL :	No.	28		
	LABOUR :	No.	28		
4.2.2.1.5	50mmØ bosal lids				
	MATERIAL :	No.	28		
	LABOUR :	No.	28		
4.2.2.1.6	100x100 bosal Lid				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.2.3	WIRING TRUNKING & CABLE TRAY				
4.2.3.1	Heavy duty galvanised cable ladder including hangers,cantilever brackets etc.				
4.2.3.1.1	1000mm Wide cable ladder				
	MATERIAL :	m	15		
	LABOUR :	m	15		
(Continued on next page)					

Item	Description	Unit	Quantity	Rate	Amount
4.2.3.1.2	1000mm Bend below / above DB				
	MATERIAL :	No.	2		
	LABOUR :	No.	2		
4.2.3.1.3	1000mm T-piece				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
4.2.3.1.4	1000mm to 800mm Reducer				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
4.2.3.1.5	1000mm to 200mm Reducer				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
4.2.3.1.6	800mm Wide cable ladder				
	MATERIAL :	m	10		
	LABOUR :	m	10		
4.2.3.1.7	800mm T-piece				
	MATERIAL :	No.	2		
	LABOUR :	No.	2		
4.2.3.1.8	800mm Bend below / above DB				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.2.3.1.9	800mm to 400mm Reducer				
	MATERIAL :	No.	4		
	LABOUR :	No.	4		
4.2.3.1.10	800mm to 200mm Reducer				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.2.3.1.11	400mm Wide cable ladder				
	MATERIAL :	m	35		
	LABOUR :	m	35		
4.2.3.1.12	400mm Bend below / above DB				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
4.2.3.1.13	400mm T-piece				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
4.2.3.1.14	400mm Bend section				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.2.3.1.15	400mm to 200mm Reducer				
	MATERIAL :	No.	2		
	LABOUR :	No.	2		
4.2.3.1.16	400mm to 100mm Reducer				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
4.2.3.1.17	200mm Wide cable ladder				
	MATERIAL :	m	70		
	LABOUR :	m	70		
4.2.3.1.18	200mm Bend below/above DB				
	MATERIAL :	No.	4		
	LABOUR :	No.	4		
4.2.3.1.19	200mm T-piece				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
4.2.3.1.20	200mm bend section				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
4.2.3.1.21	200mm to 100mm Reducer				
	MATERIAL :	No.	4		
	LABOUR :	No.	4		
4.2.3.1.22	100mm Wide cable ladder				
	MATERIAL :	m	105		
	LABOUR :	m	105		
4.2.3.1.23	100mm Bend below/above DB				
	MATERIAL :	No.	10		
	LABOUR :	No.	10		

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
4.2.3.1.24	100mm Bend section				
	MATERIAL :	No.	3		
	LABOUR :	No.	3		
4.2.3.1.25	100mm Wire mesh tray				
	MATERIAL :	m	230		
	LABOUR :	m	230		
4.2.3.1.26	100mm Wire mesh tray bend				
	MATERIAL :	No.	4		
	LABOUR :	No.	4		
4.2.3.1.27	100mm Wire mesh tray T-piece				
	MATERIAL :	No.	6		
	LABOUR :	No.	6		
4.2.3.1.28	100mm Wire mesh tray dropper				
	MATERIAL :	No.	9		
	LABOUR :	No.	9		
4.2.3.1.29	P8000 cable droppers from cable ladder to DB, 3m long				
	MATERIAL :	No.	4		
	LABOUR :	No.	4		

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
4.2.4	CONDUCTORS				
4.2.4.1	PVC insulated copper conductors drawn into conduit (Live, Neutral, Earth)				
4.2.4.1.1	6mm²				
	MATERIAL :	m	405		
	LABOUR :	m	405		
4.2.4.1.2	4mm²				
	MATERIAL :	m	1110		
	LABOUR :	m	1110		
4.2.4.1.3	2.5mm²				
	MATERIAL :	m	455		
	LABOUR :	m	455		
4.2.4.1.3	Drawwire				
	MATERIAL :	m	650		
	LABOUR :	m	650		
4.2.4.2	Terminations for PVC insulated copper conductors				
4.2.4.2.1	6mm²				
	MATERIAL :	No	6		
	LABOUR :	No	6		
4.2.4.2.2	4mm²				
	MATERIAL :	No	26		
	LABOUR :	No	26		
4.2.4.2.3	2,5mm²				
	MATERIAL :	No	13		
	LABOUR :	No	13		
4.2.4.3	Black surfix for plugs in roof space				
4.2.4.3.1	4mm² x 2core surfix fixed to structure				
	MATERIAL : (Provisional)	m	-		Rate Only
	LABOUR : (Provisional)	m	-		Rate Only
4.2.4.3.2	4mm² x 4core surfix fixed to walkway structure				
	MATERIAL : (Provisional)	m	-		Rate Only
	LABOUR : (Provisional)	m	-		Rate Only
4.2.4.3.3	Ends for 4mm² 2 core surfix				
	MATERIAL : (Provisional)	No	-		Rate Only
	LABOUR : (Provisional)	No	-		Rate Only
(Continued on next page)					

Item	Description	Unit	Quantity	Rate	Amount
4.2.4.3.4	Ends for 4mm² 4 core surfix				
	MATERIAL : (Provisional)	No	-		Rate Only
	LABOUR : (Provisional)	No	-		Rate Only
4.2.5	FITTINGS AND ACCESSORIES				
4.2.5.1	16 Amp switched socket outlet with cover installed in outlet box (boxes measured elsewhere)				
	MATERIAL :	No.	4		
	LABOUR :	No.	4		
4.2.5.2	16 Amp double switched socket outlet with cover installed in outlet box (boxes measured elsewhere)				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.2.5.3	16 Amp switched socket industrial outlet complete with box colour orange (SA + Euro).				
	MATERIAL :	No.	8		R -
	LABOUR :	No.	8		R -
4.2.5.4	16 Amp dedicated switched socket outlet with cover installed in outlet box (boxes measured elsewhere)				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
4.2.5.5	16 Amp Three phase & Neutral socket outlet with cover installed on outlet box (boxes measured elsewhere)				
	MATERIAL :	No.	4		
	LABOUR :	No.	4		
4.2.5.6	16 Amp 5pin plug top.				
	MATERIAL :	No.	4		
	LABOUR :	No.	4		
4.2.5.7	Connection of the following appliances				
4.2.5.7.1	Hot water hydro boil				
	MATERIAL : (Provisional)	No.	-		Rate Only
	LABOUR : (Provisional)	No.	-		Rate Only
4.2.5.7.2	Connect to 3ph equipment electric doors with Isolator				
	MATERIAL : (Provisional)	No.	-		Rate Only
	LABOUR : (Provisional)	No.	-		Rate Only

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
4.2.5.7.3	Connect to 3ph equipment extract fan				
	MATERIAL : (Provisional)	No.	-		Rate Only
	LABOUR : (Provisional)	No.	-		Rate Only
4.2.6	DISTRIBUTION BOARDS Complete with all accessories as specified including COC for each DB / DB Zone				
4.2.6.1	MDB				
	MATERIAL :	-		-	
	LABOUR :	-		-	
4.2.6.2	DB OJ				
	MATERIAL :	-		-	
	LABOUR :	-		-	
4.2.7	TESTING				
4.2.7.1	Testing and commission the installation included in this bill	-		-	
4.2.7.2	Provide CoC for the section in MDB	-		-	
4.2.7.3	Provide CoC for the section in DB OJ	-		-	
4.2.8	ATTENDANCE:				
4.2.8.1	Attendance on Contractor installing pipes, sleeves and manholes for electrical, telephone & electronic / IT installations	-	Sum	-	
4.2.8.2	Attendance on Telkom/PABX cable installation by client & specialist equipment for the telephone installation	-	Sum	-	
4.2.8.3	Attendance on I.T. cable installation by Client and Specialists	-	Sum	-	
4.2.8.4	Attendance on Making & Sealing of holes in Walls for cable tray & trunkings entering IT room.	-	Sum	-	
4.2.9	OTHER : To be specified by the Tenderer				
4.2.9.1					
4.2.9.2					
4.2.9.3					
SUBTOTAL : Carried forward to Summary					R -

Item	Description	Unit	Quantity	Rate	Amount
5	BILL NO.5 : OFFICE / STAFF /MEETING ROOM / RESTROOMS / ETC.				
5,1	LV ELECTRICAL INSTALLATIONS : LIGHTING				
5.1.1	CONDUITS				
5.1.1.1	Conduits in ceiling space/on surface				
5.1.1.1.1	25mmØ PVC				
	MATERIAL:	m	-		Rate Only
	LABOUR:	m	-		Rate Only
5.1.1.1.2	20mmØ PVC				
	MATERIAL :	m	600		
	LABOUR :	m	600		
5.1.1.2	Conduits in slab				
5.1.1.2.1	25mmØ PVC				
	MATERIAL :	m	-		Rate Only
	LABOUR :	m	-		Rate Only
5.1.1.2.2	20mmØ PVC				
	MATERIAL :	m	100		
	LABOUR :	m	100		
5.1.1.3	Conduits recessed in brickwork				
5.1.1.3.1	25mmØ PVC				
	MATERIAL :	m	-		Rate Only
	LABOUR :	m	-		Rate Only
5.1.1.3.2	20mmØ PVC				
	MATERIAL :	m	20		
	LABOUR :	m	20		
5.1.2	CONDUIT BOXES				
5.1.2.1	Outlet boxes without covers				
5.1.2.1.1	100x50x50 deep PVC onto brick, concrete surface or in roof space				
	MATERIAL :	No.	6		
	LABOUR :	No.	6		

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
5.1.2.1.2	50mmØ x 25 PVC with lid deep onto brick, concrete surface or in roof space				
	MATERIAL :	No.	6		
	LABOUR :	No.	6		
5.1.3	CONDUCTORS				
5.1.3.1	PVC insulated copper conductors drawn into conduit				
5.1.3.1.1	2.5mm²				
	MATERIAL :	m	450		
	LABOUR :	m	450		
5.1.3.2	PVC insulated copper earth conductors drawn into conduit				
5.1.3.2.1	2,5mm²				
	MATERIAL	m	225		
	LABOUR	m	225		
5.1.4	LUMINAIRES (including Tubes & Lamps)				
5.1.4.1	Supply & Install Luminiares				
5.1.4.1.1	Type F4				
	MATERIAL :	No.	2		
	LABOUR :	No.	2		
5.1.4.1.2	Type F4E				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
5.1.4.1.3	Type F7				
	MATERIAL :	No.	9		
	LABOUR :	No.	9		
5.1.4.1.4	Type F7E				
	MATERIAL :	No.	3		
	LABOUR :	No.	3		
4.1.4.1.15	Type D1				
	MATERIAL :	No.	4		
	LABOUR :	No.	4		
(Continued on next page)					

Item	Description	Unit	Quantity	Rate	Amount
5.1.5	FITTINGS AND ACCESSORIES				
5.1.5.1	Surface-mounted switch units(s) with coverplate(s) (boxes measured elsewhere)				
5.1.5.1.1	16A single lever, one-way light switch				
	MATERIAL :	No.	6		
	LABOUR :	No.	6		
5.1.5.1.2	16A single lever, two-way light switch				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
5.1.5.1.3	16A three lever, one way light switch				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
5.1.5.1.4	Presence detector, light switch				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
5.1.5.1.5	16 Amp LED Dimmer Switch				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
5.2	LV ELECTRICAL INSTALLATIONS : POWER AND TELEPHONE				
5.2.1	CONDUITS				
5.2.1.1	Conduits fixed on ceiling & surface				
5.2.1.1.1	32mmØ PVC				
	MATERIAL :	m	-		Rate Only
	LABOUR :	m	-		Rate Only
5.2.1.1.2	25mmØ PVC				
	MATERIAL :	m	50		
	LABOUR :	m	50		

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
5.2.1.1.3	20mmØ PVC				
	MATERIAL :	m	-		Rate Only
	LABOUR :	m	-		Rate Only
5.2.1.2	Conduits in brickwork				
5.2.1.2.1	25mmØ PVC				
	MATERIAL :	m	100		
	LABOUR :	m	100		
5.2.1.2.2	20mmØ PVC				
	MATERIAL :	m	-		Rate Only
	LABOUR :	m	-		Rate Only
5.2.1.3	Conduits in slab				
5.2.1.3.1	32mmØ PVC				
	MATERIAL :	m	-		Rate Only
	LABOUR :	m	-		Rate Only
5.2.1.3.2	25mmØ PVC				
	MATERIAL :	m	10		
	LABOUR :	m	10		
5.2.1.3.3	20mmØ PVC				
	MATERIAL :	m	-		Rate Only
	LABOUR :	m	-		Rate Only
5.2.2	CONDUIT BOXES AND ACCESSORIES				
5.2.2.1	200x2000x2000 Surface IT Drawbox with wood				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
5.2.2.2	Outlet boxes without covers				
5.2.2.2.1	100x100x50 deep PVC in brick or concrete				
	MATERIAL :	No.	25		
	LABOUR :	No.	25		
5.2.2.2.2	100x50x50 deep PVC in brick or concrete				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only
5.2.2.2.3	100x100x50 deep PVC surface onto brick, concrete surface or in roof space				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
5.2.2.2.4	50mmØ x 25 surface PVC onto brick, concrete surface or in roof space				
	MATERIAL :	No.	25		
	LABOUR :	No.	25		
5.2.2.2.5	50mmØ PVC lids				
	MATERIAL :	No.	25		
	LABOUR :	No.	25		
5.2.3	Powerskirting & Recessed Floor Outlets				
5.2.3.1	PVC Powerskiting complete with covers fixing outlets as indicated				
5.2.3.1.1	3 compartment 2 cover powerskirting				
	MATERIAL :	m	50		
	LABOUR :	m	50		
5.2.3.1.2	Corner piece				
	MATERIAL :	No.	5		
	LABOUR :	No.	5		
5.2.3.1.3	End Caps				
	MATERIAL :	No.	6		
	LABOUR :	No.	6		
5.2.3.1.4	Outlets complete with covers for powerskirting/				
5.2.3.1.5	16 Amp SSO for powerskirting				
	MATERIAL :	No.	10		
	LABOUR :	No.	10		
5.2.3.1.6	16 Amp D-pin SSO for powerskirting				
	MATERIAL :	No.	9		
	LABOUR :	No.	9		
5.2.3.1.7	Tel/IT Cover Plate for powerskirting				
	MATERIAL :	No.	8		
	LABOUR :	No.	8		
5.2.3.1.8	Back box for powersteering				
	MATERIAL :	No.	6		
	LABOUR :	No.	6		
5.2.3.1.9	Floor box outlet complete with SSO's (recessed 2xSA & 2xEuro with 2xIT/Data outlets)				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
5.2.3.1.10	TV outlet				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
5.2.4	CONDUCTORS				
5.2.4.1	PVC insulated copper conductors drawn into conduit				
5.2.4.1.1	4mm²				
	MATERIAL :	m	1000		
	LABOUR :	m	1000		
5.2.4.2	PVC insulated copper earth conductors drawn into conduit				
5.2.4.2.1	2,5mm²				
	MATERIAL :	m	500		
	LABOUR :	m	500		
5.2.4.2.2	Drawwire				
	MATERIAL :	m	500		
	LABOUR :	m	500		
5.2.5	FITTINGS AND ACCESSORIES				
5.2.5.1	16 Amp switched socket outlet with SA & Euro with cover installed in outlet box (boxes measured elsewhere)				
	MATERIAL :	No.	13		
	LABOUR :	No.	13		
5.2.5.3	16 Amp dedicated switched socket outlet with cover installed in outlet box (boxes measured elsewhere)				
	MATERIAL :	No.	13		
	LABOUR :	No.	13		
5.2.5.4	25A double pole isolator surface including box and cover (weatherproof)				
	MATERIAL :	No.	5		
	LABOUR :	No.	5		
5.2.5.5	30A Three phase isolator recessed including box and cover (weatherproof)				
	MATERIAL :	No.	-		Rate Only
	LABOUR :	No.	-		Rate Only

(Continued on next page)

Item	Description	Unit	Quantity	Rate	Amount
5.2.5.6	Connection of the following appliances				
5.2.5.6.1	Connect to extract fan for bathroom				
	MATERIAL :	No.	1		
	LABOUR :	No.	1		
5.2.7	TESTING				
5.2.7.1	Testing and commission the installation included in this bill	-	Sum	-	
5.2.8	ATTENDANCE:				
5.2.8.1	Attendance on Contractor installing pipes, sleeves and manholes for electrical, telephone & electronic / IT installations	-	Sum	-	
5.2.8.2	Attendance on Telkom/PABX cable installation by client & specialist equipment for the telephone installation	-	Sum	-	
5.2.8.3	Attendance on I.T. cable installation by Client and Specialists	-	Sum	-	
5.2.9	OTHER : To be specified by the Tenderer				
5.2.9.1					
5.2.9.2					
5.2.9.3					
5.2.9.4					
SUBTOTAL : Carried forward to Summary					R -

Item	Description	Unit	Quantity	Rate	Amount
6.	BILL NO.8 : PROV SUMS & CONTINGENCY				
6.1	Additional earthing should it be required get the correct earth reading at the MDB.				R 20 000,00
6.2	Power supply for ventilation in the office block.				R 30 000,00
6.3	Additional wireways required by the IT department				R 20 000,00
6.4	Additional emergency fire foam supply				R 60 000,00
6.5	Decorative light fittings in office areas once layout is finalised				R 20 000,00
6.6	Fire Detection conduits in office / canteen area				R 10 000,00
6.7	Contingecy Sum				R 500 000,00
SUBTOTAL :	Carried forward to Summary				R 660 000,00

Item	Description	Unit	Quantity	Rate	Amount
7	BILL NO.7 : PROVISIONAL DAYWORKS **(Provisional : as allowance only)** **(Exclusive of VAT)** Provisional dayworks allowed for : Making safe of and work on and alterations to the existing installations not already included in the specification Work sall only be carried out on Dayworks where specifically agreed to or instructed by the Employer/ Architect/Engineer in advance. Generally the cost of additions and omissions shall be based on the scheduled rates in Part 5				
7.1	Labour The rates for labour in Dayworks are to be applied to the hours worked and they are to include for the cost of labour, supervision, overheads, transport, profit, all lefies, bonuses, leave pay, etc. not already covered by the P&G in the contract sum.				
a	Electrician	hr		……...	……..……
b	Operator (semi-skilled)	hr		……	……...
c	Labourer	hr		……	……...
	Time sheets specifying the workers involved, the time spent daily upon the work and the materials imployed in Dayworks shall be deliveded to the Employer/Architect/Engineer or his representative weekly				
7.2	Materials the cost of materials in Dayworks ahall be based on the net cost and shall be substantiated with invoices and, where no rates exist in the Schedules for such material, shall be based on the net cost and shall be substantiated with invoices				
a	Provisional Sum for materials in Dayworks.			……...	……..……
b	Add for supervision, insurances, profit, transport, establishment changes, etc. not already covered by the P&G in the contract sum. (…….%)			……...	……..……
7.3	Plant, etc. The cost of mechanically operated plant and transport, etc. in Dayworks are to be based on the net costs and shall be substantiated with invoices and/or audited statements.				
a	Provisional sum for hire of mechanical plant, etc. in Dayworks.			……...	……..……
b	Add for supervision, insurances, profit, transport, establishment changes, etc. not already covered by the P&G. (…….%)			……...	……..……
SUBTOTAL : Carried forward to Summary					

ANNEXURE C2.2-B Mechanical

Item	Description	Unit	Quantity	Rate	Amount
1	BILL NO.1 : PRELIMINARY & GENERAL				
1,1	Allow for PRELIMINARY & GENERAL Costs : (Site establishment and overheads)		Sum		R -
1,2	Safety plan and measures	1	Sum		R -
1,3	OTHER : To be specified by the Tenderer				
1,3,1					
1,3,2					
1,3,3					
1,3,4					
SUBTOTAL :	Carried forward to Summary				R -

Item	Description	Unit	Quantity	Rate	Amount
	BILL NO.2 : EAC (See Drawing CM0770-R2)				
	Inclusive of supply, installation, consumables, flexible ducting, electrical controls, wiring, etc for completion as per specification Note: All ducting connection joints to be sealed Allow for scaffolding to work at roof level **All equipment as per SABS approved standards: All costs for connecting, delivery, fittings, connections, bends, junctions and hanging materials to be included.**				
	EVAPORATIVE AIR COOLER				
2,1	KERUILAI KD18A rate of 4950L/s @ 185 Pa	No	1	R -	R -
	DUCTING				
2,2	800x800	m	5	R -	R -
2,3	ø600	m	15	R -	R -
2,4	ø400	m	16	R -	R -
	TRANSFORMATIONS				
2,5	Evaporative cooler to duct transformation	No	1	R -	R -
2,6	ø600 - ø400	No	2	R -	R -
	ANCILLARIES				
2,7	ø600 Spigot	No	2	R -	R -
2,8	600x300 GRILLE + OBD	No	8	R -	R -
2,9	ø400 Stop-end	No	2	R -	R -
2,10	ø12.7mm shut off valve	No	1	R -	R -
2,11	ø12,7mm uPVC piping	m	50	R -	R -
SUBTOTAL :					R -

Item	Description	Unit	Quantity	Rate	Amount
	BILL NO.3 :Juice Plant (See Drawing CM0770-R2)				
	Inclusive of supply, installation, consumables, flexible ducting, electrical controls, wiring, etc for completion as per specification Note: All ducting connection joints to be sealed Allow for scaffolding to work at roof level **All equipment as per SABS approved standards: All costs for connecting, delivery, fittings, connections, bends, junctions and hanging materials to be included.**				
	EXTRACT AIR FAN 1				
3,1	AMS TD800/200 SILENT SERIES c/w ON/OFF switch rate of 195 L/s @ 150 Pa	No	1	R -	R -
3,2	Weather louvre, natural anodised 350x300, including frame	No	1	R -	R -
3,3	350x300 wall sleeve	No	1	R -	R -
3,4	AMS Sound Attenuator SN020 060 600mm Long	No	2	R -	R -
	DUCTING				
3,5	Ø250	m	5	R -	R -
3,6	Ø200	m	5	R -	R -
	TRANSFORMATION				
3,7	Wall sleeve to fan tranformation	No	1	R -	R -
3,8	Fan to Duct transformation	No	1	R -	R -
3,9	Ø250 90° Bend	No	2	R -	R -
3,10	Ø250 - Ø200	No	1	R -	R -
	ANCILLARIES				
3,11	150x100 Grille + OBD	No	3	R -	R -
3,12	150x100 Spigot	No	3	R -	R -
3,13	Ø200 Stop-end	No	1	R -	R -
3,14	Ø250 Fire damper	No	1	R -	R -
SUBTOTAL :					R -

Item	Description	Unit	Quantity	Rate	Amount
	BILL NO.4 : JUICE PLANT AC (See Drawing CM0770-R2)				
	Inclusive of supply, installation, consumables, flexible ducting, electrical controls, wiring, etc for completion as per specification Note: All ducting connection joints to be sealed Allow for scaffolding to work at roof level **All equipment as per SABS approved standards: All costs for connecting, delivery, fittings, connections, bends, junctions and hanging materials to be included.**				
	AC G.01 - G,02 (Ground Floor)				
4,1	DAIKIN FCAG35B	No	2	R -	R -
4,2	Ø6,5 Liquid line (Incl. all fittings & bends)	m	40	R -	R -
4,3	Ø9,5 Gas line (Incl. all fittings & bends)	m	40	R -	R -
4,4	VP25(O.D32/I.D25) Drain pipe (incl. all fittings & bends)	m	40	R -	R -
4,5	Bluechem treatment	No	2	R -	R -
4,6	Controller	No	2	R -	R -
4,7	Cable tray	No	40	R -	R -
	AC 1.01 - 1,02 (First Floor)				
4,8	DAIKIN FCAG35B	No	2	R -	R -
4,9	Ø6,5 Liquid line (Incl. all fittings & bends)	m	40	R -	R -
4,10	Ø9,5 Gas line (Incl. all fittings & bends)	m	40	R -	R -
4,11	VP25(O.D32/I.D25) Drain pipe (incl. all fittings & bends)	m	40	R -	R -
4,12	Bluechem treatment	No	2	R -	R -
4,13	Controller	No	2	R -	R -
4,14	Cable tray	No	40	R -	R -
SUBTOTAL :					R -

tem	Description	Unit	Quantity	Rate	Amount

	BILL NO.5 : Smoke ventilation (See Drawing CM0770-R210 & R200) Inclusive of supply, installation, consumables, flexible ducting, electrical controls, wiring, etc for completion as per specification Note: All ducting connection joints to be sealed Allow for scaffolding to work at roof level **All equipment as per SABS approved standards: All costs for connecting, delivery, fittings, connections, bends, junctions and hanging materials to be included.**				
	SMOKE EXTRACTION				
5,1	AMS SQ0714BA14/6 SQ SERIES rate of 7000 l/s @150 Pa	No	1	R -	R -
5,2	Weather Louver, natural anodised 1700 x 1650, including frame	No	1	R -	R -
5,3	1700 x 1650 wall sleeve	No	1	R -	R -
	TRANSFORMATION				
5,4	Wall sleeve to Fan transformation	No	1	R -	R -
	SMOKE MAKE-UP AIR FAN				
5,5	AMS SQ0714AA14/6 SQ SERIES rate of 5600 l/s @150 Pa	No	1	R -	R -
5,6	Weather Louver, natural anodised 1500 x 1500, including frame	No	1	R -	R -
5,7	1500 x 1500 wall sleeve	No	1	R -	R -
	TRANSFORMATION				
5,8	Wall sleeve to Fan transformation	No	1	R -	R -
SUBTOTAL :					R -

Item	Description	Unit	Quantity	Rate	Amount
	BILL NO.6 : GENERAL				
6,1	Test & commission the installation as per SABS	-	Sum		R -
6,2	Painting, labeling and identification as per SABS	-	Sum		R -
6,3	Workshop drawings	-	Sum		R -
6,4	Samples	-	Sum		R -
6,5	Manuals & Instructions	No	3		R -
6,6	Operator Training	-	Sum		R -
6,7	1 Year Maintenance Contract and Guarantee (2 Inspections; 1 every 6 Months)	-	Sum		R -
SUBTOTAL : Carried forward to Summary					R -

ANNEXURE C2.2-B Mechanical

Item	Description	Amount
	SUMMARY	
1	Bill no 1 : P&G	R -
2	Bill no 2 : JUICE PLANT FIRE SERVICES	R -
3	Bill no 3 : HYDRANT PUMP + TANK	R -
5	Bill no 5 : GENERAL	R -
TOTAL		R -

Item	Description	Unit	Quantity	Rate	Amount
1	BILL NO.1 : PRELIMINARY & GENERAL				
1,1	Allow for PRELIMINARY & GENERAL Costs : (Site establishment and overheads)	-	Sum	-	
1,2	Safety plan and measures	-	Sum	-	
1,3	OTHER : To be specified by the Tenderer				
1,3,1					
1,3,2					
1,3,3					
SUBTOTAL :	Carried forward to Summary				R -

Item	Description	Unit	Quantity	Rate	Amount
	BILL NO. 2: JUICE FACILITY FIRE SERVICES Including supply, installation, consumables, hangers, painting, electrical controls, wiring, etc and all associated costs for completion of works as per specification:				
	All equipment as per SABS approved standards: All costs for supply, delivery, fittings, connections, bends, joints, junctions and hanging materials, etc to be included.				
	FIRE HOSE REEL				
2,1	Fire hose reel, c/w 30m hose to EN694 standard, incl. chromium plated stopcock, shut-off nozzle and wall bracket.	No	2	R -	R -
2,2	Pressure gauge, 100mm diameter glycerine filled 1000kPA, incl. stopcock	No	2	R -	R -
2,3	ø25mm Shut-off Valve (For Hose Reel)	No	2	R -	R -
	PORTABLE FIRE EXTINGUISHERS				
	All extinguisher as per SABS approved standards. Extinguishes to be provided each with 25mm thick meranti backing board min. size 150 x 700mm, plugged and screwed to brickwork and all exposed edges bevelled, incl. 1 x coat primer and 2 x coats Signal Red enamel paint. Mounting brackets to be approved in accordance with SABS 810.				
2,4	Extinguisher 9kg DCP	No	12	R -	R -
2,5	Extinguisher 4,5kg DCP	No	4	R -	R -
	PHOTOLUMINESCENT (190 X 190)				
2,6	Running Man + Arrow	No	1	R -	R -
2,7	Fire Extinguisher + Fire Hose Reel + Arrow	No	2	R -	R -
2,8	Fire Extinguisher + Arrow	No	3	R -	R -
2,9	Exit Signage	No	5	R -	R -
	CUT-OFF SPRINKLERS				
2,10	Sprinkler Head VK3021 Quick response, K5.6 (cut off sprinklers)	No	12	R -	R -
2,11	Ø40 Steel piping	m	50	R -	R -
2,12	Ø32 Steel piping	m	10	R -	R -
2,13	Ø25 Steel piping	m	30	R -	R -
SUBTOTAL : Carried forward to Summary					R -

	BILL NO. 3: Hydrant Pump and Tank Including supply, installation, consumables, hangers, painting, electrical controls, wiring, etc and all associated costs for completion of works as per specification: All equipment as per SABS approved standards: All costs for supply, delivery, fittings, connections, bends, joints, junctions and hanging materials, etc to be included.						
	PUMP SET - ALL TRIMMINGS						
3,1	Diesel Hydrant pump set: - 4 Cylinder engine – 2400l/min @650kPa. Standalone panel.	No	1	R	-	R	-
3,2	Jockey Pump - Lowara or similar	No	1	R	-	R	-
3,3	Controller - Hydrant	No	1	R	-	R	-
3,4	Jockey Controller - Hydrant	No	1	R	-	R	-
3,5	Electrical Cabling	No	1	R	-	R	-
3,6	Autostart arrangement - Hydrant	No	1	R	-	R	-
3,7	Flow Meter	No	1	R	-	R	-
	WATER REQUIREMENTS -SBS18/09 FIRE TANKS COMPLETE Effective water capacity - 1160m^3						
3,8	Circular tanks - @ 1160m^3 Nominal water: 2 tanks. Include civils, ring beams per tank	No	2	R	-	R	-
3,9	Tank Suction Line	No	1				
3,10	All ancilary pioingand guages to be supplied, tank piping "bermad" valves, butterfly valves, level indicators, 300mm suction. Complete for both tanks	No	1	R	-	R	-
3,11	Connection to municiple line	No	1	R	-	R	-
	Preliminary and General						
3,12	Site establishment and clearance	No	1	R	-	R	-
3,13	Site supervission and contract management	No	1	R	-	R	-
3,14	Testing, Balancing and commissioning	No	1	R	-	R	-
3,15	As-built drawings	No	1	R	-	R	-
3,16	12 Month Guarantee and maintenace	No	1	R	-	R	-
3,17	Contract drawings	No	1	R	-	R	-
3,18	Transport of materials to site	No	1	R	-	R	-
3,20	Safety file, Safety Material	No	1	R	-	R	-
SUBTOTAL : Carried forward to Summary						R	-

Item	Description	Unit	Quantity	Rate	Amount
	BILL NO.4 : GENERAL				
4,1	Painting, labeling and identification as per SABS	-	Sum	-	R -
4,2	Workshop Drawings	-	Sum	-	R -
4,3	Samples	-	Sum	-	EXCL.
4,4	Liason with local Authority	-	Sum	-	R -
4,5	Painting of pipework	-	Sum	-	R -
4,6	Works test with Engineer	-	Sum	-	R -
4,7	Manuals & Instructions	-	Sum	-	R -
4,8	Operator Training	-	Sum	-	R -
4,9	Maintenance Contract and Guarantee	-	Sum	-	R -
SUBTOTAL :	Carried forward to Summary				R -