

LIMPOPO ECONOMIC DEVELOPMENT AGENCY

SUMMARY OF SCHEDULE OF QUANTITIES AND CALCULATION OF CONTRACT AMOUNT

SECTION AND DESCRIPTION	AMOUNT
SECTION A0: PLANNING AND DESIGN	R
SECTION A : PRELIMINARY AND GENERAL	R
SECTION B: EARTHWORKS	R
SECTION P : BUILDING	R
SECTION R : ELECTRICAL, MECHANICAL AND PLUMBING	R
SECTION S : POWER GENERATION EQUIPMENT	R
SECTION T : PUMPS & MOTORS, CONTROLS & CABLES	R
SCHEDULE J : DRILLING OF BOREHOLES	R
TOTAL SCHEDULE OF QUANTITIES	R
ADD 15% CONTINGENCIES	R
SUB TOTAL	R
ADD 15% VAT	R
TOTAL TENDER AMOUNT	R

AMOUNT IN WORDS: _____

Surname and Names: _____

Company Name: _____

Signature: _____

Date: _____

Design, construction, refurbishment and upgrade of existing building facility and installation of sweet potato yoghurt processing machinery for Kgarose Kgaros Pty Ltd at Seshego Industrial Park, in Polokwane

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
SECTION A0: PLANNING AND DESIGN						
	8	SUMS STATED PROVISIONALLY BY ENGINEER				
A0.1.1		a) Appointment of Food processing specialist/engineer for Site Investigation and Desk Study of Client Concept and issue design, drawings and design report for the equipment and facility development: for the purpose of acquiring approvals for implementation from client and authorities	Prov Sum	1	400000	R 400,000.00
A0.1.2		Profit over above	%	R400,000		
A0.1.3		All design and reports Submissions and facilitations to acquire approval from Polokwane Municipality, Dept of Health and Dept of Environment	Sum	1		
A0.1.4		a) Appointment of Environmental Consultrant/ Specialist for the application, conducting, and acquiring Environmental Impact Assessment Exemption/ clearance / Approval	Prov Sum	1	50000	R 50,000.00
A0.1.5		Profit over above	%	R50,000		
A0.1.6		Appointment of Social Facilitation professional person for the project planning and design phase	Prov Sum	1	50000	R 50,000.00
A0.1.7		Profit over above	%	R50,000		
A0.1.8		Appointment of Social Facilitation professional person for the project Construction phase, as instructed by the engineer	Prov Sum	1	100000	R 100,000.00
A0.1.9		Profit over above	%	R100,000		
A0.1.10		Time related claim for Contractor to facilitate and complete Planning and Design phase to achieve all approvals	Sum	1		
A0.1.11		Contractor's commitment to conclude designs and acquire approvals period	Months		Offered Time Period	
	NB	The Site Implementation will only proceed once the project has acquired approvals from all authorities inline with regulations				
		SUMS STATED PROVISIONALLY BY ENGINEER (Employer)				
		TRAINING AND COMMISSIONING				
A0.1.11		Provision of Basic principles training on use and operation of facility and equipment (5 People)	Sum	1	30,000	30,000.00
A0.1.12		Provision of raw materials and packaging materials for comminissioing and training as instructed by the engineer	PC sum	1	50,000	50,000.00
A0.1.13		Mark up on above	%	80,000		
A0		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
A0		Brought forward				
A0.1.14		Provision of monthly maintainance for a period of 12 months after completion, for all mechanical and electrical equipment service and repairs	Months	12		
		Mark up on other specialists services - Detail designs and installation of works under engineer's instructions				
A0.1.15		Food Processing Specialist Services - Professional agricultural or mechanical engineer or technologist or manufacturing firm food science specialist during construction under engineer's instruction	PC sum	1	350,000	350,000.00
A0.1.16		Mark up on above	%	350,000		
A0.1.17		Electrical and mechanical engineering services for design and construction including supervision and as-built drawings, and COC issuing	PC sum	1	200,000	200,000.00
A0.1.18		Mark up on above	%	200,000		
A0.1.19		Waste Handling Design and Implementation for design and construction including supervision and as-built drawings, and COC issuing	PC sum	1	150,000	150,000.00
A0.1.20		Mark up on above	%	150,000		
A0.1.21		Agricultural/ mechanical Engineering (Ancillary works) as instructed by engineer when required	PC sum	1	150,000	150,000.00
A0.1.22		Mark up on above	%	150,000		
A0.1.23		Provision of Operation and maintenance manual for all equipment and plant and facility	PC sum	1	30,000	30,000.00
A0.1.24		Mark up on above	%	30,000		
A0.1.25		Product Certification services instructed by engineer	PC sum	1	200,000	200,000.00
A0.1.26		Mark up on above	%	200,000		
		TOTAL SECTION "A0" CARRIED FORWARD TO SUMMARY				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
<u>SECTION A: PRELIMINARY & GENERAL</u>						
		<u>Note:</u> Contractor to Hire at least 15 LOCAL personnel/labour at not less than R220/day labour rate for a 8 months Contract Period.				
		All item rates in the BOQ to include materials supply, installation, test and commission, unless stated otherwise on specific items				
A.1	SANS 1200A	SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS				
A.1.1	8.3.1	Contractual Requirements	Sum	1		
	8.3.2	Establishment of Facilities on Site				
	8.3.2.2	<u>FACILITIES FOR CONTRACTOR</u>				
A.1.2		a) Offices and storage shed	Sum	1		
A.1.3		d) Living accommodation	Sum	1		
A.1.4		e) Ablution and Latrine Facilities	Sum	1		
A.1.5		f) Tools and equipment	Sum	1		
A.1.6		g) Water supplies, electrical power and communication	Sum	1		
A.1.7	5,1,1	Setting out of the works	Sum	1		
A.1.8	8.3.4	Removal of Site Establishment	Sum	1		
	8.4	SCHEDULED TIME-RELATED ITEMS				
A.1.9	8.4.1	Contractual Requirements	Months	8		
A.1.10		Insurance of the works and Performance Guarantee	Months	8		
	8.4.2	Operation and Maintenance of Facilities on Site				
	8.4.2.2	<u>FACILITIES FOR CONTRACTOR</u>				
A.1.11		a) Offices and storage shed	Sum	1		
A.1.12		d) Living accommodation	Sum	1		
A.1.13		e) Ablution and Latrine Facilities	Sum	1		
A.1.14		f) Tools and equipment	Sum	1		
A.1.15		g) Water supplies, electrical power and communication	Sum	1		
A.1.16	8.4.3	Supervision for Duration of Construction	Sum	1		
A		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
A		Brought forward				
		OCCUPATIONAL HEALTH AND SAFETY				
A.1.20		Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	Sum	1		
A.1.21		Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	Month	8		
A.1.22		Submission of the Health and Safety File	Sum	1		
A.1.23		Dust suppression by water spraying construction site, with 10 000L Tanker	Day	1		
A.1.24		Supply and fix unto and cover existing clear view fencing with 80% shaded net	m	300		
A.1.25		Extra over mesh fence for pedestrian gate size 1.8 x 1,8m high.	No	0		
		<u>Provision for Personal Protective Equipment and Protective Clothing per each person:</u>				
A.1.26		Reflective vests.	No	15		
A.1.27		Hard hats.	No	15		
A.1.28		Protective foot wear.	No	15		
A.1.29		Ear Plugs.	No	15		
A.1.30		Dust Masks.	No	15		
A.1.31		Working suite - jacket and pants	No	15		
		<u>Costs of Medical Certificates and Medical Surveillance:</u>				
A.1.32		Entry medical fitness examinations per employee	No	15		
A.1.33		Respiratory prevention kit allocation and routine screening	No	15		
A.1.34		Exit Examinations per employee	No	15		
	SANS 1200A	DAYWORKS				
A.2	8.7	Daywork Labour , for instructed day works not in the BOQ				
A.2.1		Contractor's Representative	hour	80		
A.2.2		Surveyor	hour	16		
A.2.4		Plumber	hour	80		
A.2.5		Boilermaker	hour	80		
A.2.6		Bricklayer	hour	120		
A		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
A		Brought forward				
A.2.7		Plasterer	hour	120		
A.2.8		Welder with API 1104 Certificate	hour	40		
A.2.9		Electrician	hour	1		
A.2.10		Semi-skilled labourer	hour	120		
A.2.11		Labourer	hour	120		
A,3	8.7	Plant hire : All Costs included for Works				
A.3.1		Crane 20 t - 35 t capacity	hour	1		
A.3.2		Tractor 60 kW - 90 kW	hour	1		
A.3.3		TLB 60 kW - 70 kW	hour	1		
A.3.4		Motor graders 150 kW - 160 kW	hour	1		
A.3.5		Motor graders 150 kW - 160 kW	hour	1		
A.3.6		Wheel excavators 0,4 - 1,25m³ bucket size	hour	1		
A.3.7		Water tankers 4 000 - 20 000 litre	hour	1		
A.3.8		Drilling rig up to 200 metres	hour	1		
A.3.9		Borehole Testing equipment up 10 litres/s	hour	1		
A.3.10		Dumpers 0,5m³ (Hydraulic tip)	hour	1		
A.3.11		Mono pump with 80mm DN outlet (diesel driven) 2.2 - 7.5 kW	hour	1		
A.3.12		Arc-welding unit (300 A)	hour	1		
A.3.13		10 kVA (petrol) 220V Generator	hour	1		
A.3.14		30 kVA (diesel) 380V - 3ph Generator	hour	1		
A.4		CLO				
A.4.1		Hire Local Community Liason Officer	Prov Sum	8	6000	48,000.00
A.4.2		Profit over above	%	48,000.00		
		TOTAL SECTION "A" CARRIED FORWARD TO SUMMARY				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
<u>SECTION B: EARTHWORKS</u>						
B.1		SITE CLEARANCE				
B.1.1		Clear and grub site including vegetation, grass clearing, waste materials removal and transport to municipal dumping site, and other construction waste materials.	m ²	2400		
		<u>SOIL POISONING</u>				
B.1.2		Vegetation herbicide including no growth soil poisoning and anti-termite soil poisoning applied by a Registered Pest Control company utilizing complaint chemicals	m ²	2400		
		Traffic Control during Works				
B.1.3		Managing works which interact with traffic, e.g. delivery trucks, including all compliance requirement with Traffic management and safety management	Sum	1		
		DRAINAGE CHANNELS				
B.1.4		25Mpa/19mm V shaped concrete drainage channel 100mm thick with overall canal size 600mm wide x 50mm deep finished smooth on all exposed surfaces to a uniform dense finish with closed cell expanded polyethylene filler and polyurethane sealant expansion joints at 2m centres, 150mm bottom layer to be ripped and re-compacted to 93% Modified AASHTO density, 150mm top layer of G5 imported material to 95% Modified AASHTO density including all necessary excavation, backfilling, carting away, cutting into paving, formwork, reinforcement, dowels, etc.. Channels including slopes, overall shape etc.	m	120		
		PAVING				
		200 x 150 mm cement interlocking paving brick, laid in herringbone pattern in accordance with SANS 1200 MJ and CMA Concrete Block Paving Manuals, with a minimum longitudinal fall of 1% on a transverse fall of at least 2% on 20mm compacted sand bed with fine jointing sand swept and vibrated into joints, all laid on subbase conforming to SANS 1200 D Degree of Accuracy (sub-base elsewhere measured) 1. Paving to be inspected and re-sanded after three months. Rates for paving must include all cutting.				
B		Carried forward				

Design, construction, refurbishment and upgrade of exisitng building facility and installation of sweet potato yoghurt processing machinery for Kgarose Kgaros Pty Ltd at Seshego Industrial Park, in Polokwane

[illegible]

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
<u>SECTION P : BUILDING</u>						
P.1		<u>DEMOLISHING AND REMOVING</u>				
P.1.1		Demolish existing building structures comprising of brickwork, roofing, closures and foundations. and dispose safely at municipal dumping site	m ²	50		
P.1.2		Demolition of non-reinforced concrete, to 200mm depth	m ²	1		
P.1.3		Demolition of reinforced concrete, to 200mm depth	m ²	10		
P.1.4		Cart away rubble from demolitions and dispose safely at municipal dumping site	m ³	1		
P.1.5		Restore site with soil material filling and compaction.	m ³	5		
P.1.6		Saw cutting of non reinforced concrete before demolition, to 200mm depth, for new foundations or casting and drainage installations	m	200		
P.1.7		Saw cutting of reinforced concrete before demolition, to 200mm depth, for new foundations or casting and drainage installations	m	400		
P.2		<u>EARTHWORKS</u>				
		<u>Excavation in earth not exceeding 1,5m deep:</u>				
P.2.1		Trenches	m ³	80		
P.2.2		Footing Holes.	m ³	5		
P.2.3		Cut levels and depositing excavated material in prescribed stock piles on site.	m ³	1		
		<u>Extra over trench and hole excavations in earth for excavation in:</u>				
P.2.4		Intermediate excavation and compacted bases	m ³	45		
P.2.5		Soft/loose rock	m ³	15		
P.2.6		Hard rock	m ³	10		
		<u>Extra over all excavations for carting away:</u>				
P.2.7		Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor.	m ³	1		
		<u>Risk of collapse of excavations:</u>				
P.2.8		Shoring Sides of trench and hole excavations not exceeding 1,5m deep.	m ²	50		
P.2.9		Shoring Sides of trench and hole excavations exceeding 1,5m deep.	m ²	50		
P		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
P		Brought forward				
		<u>Keeping excavations free of water:</u>				
P.2.10		Keeping excavations free from mud and storm water	Sum	1		
P.2.11		Handling and Keeping excavations free from water irrespective of source.	Sum	1		
P.3		<u>SOIL POISONING</u>				
		Vegetation herbicide and anti-termite soil poisoning applied by a Registered Pest Control company utilizing complaint chemicals				
P.3.1		Surrounding area, foundation trenches/ furrows, under floors, forming against foundation walls. Including injecting into existing facility boundary foundations	m ²	450		
P.3.2		To bottoms and sides of trenches, holes, etc. to new excavations	m ²	150		
P.4		<u>BACK FILLING</u>				
P.4.1		Back filling obtained from the excavations and / or prescribed stock piles on site (minimum G7 material) compacted to 93% Mod. AASHTO density.	m ³	45		
P.4.2		Imported G5 filling, selected and supplied by the Contractor, including depositing in layers not exceeding 150mm thick and compacting to 98% modified AASHTO dry densit. Including areas for paving	m ³	420		
P.4.4		Coarse river sand filling supplied by the contractor.	m ³	6		
P.4.5		Compaction of in-situ material under floors etc including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% Mod AASHTO density.	m ³	5		
P.4.6		Allow for Prescribed density tests on filling compaction by an approved laboratory to determine density of filling material.	no	1		
P.4.7		Allow for sample collection and submitting for test by an approved laboratory to determine material class, for site stock piled and borrowing materials	no	1		
P		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
P		Brought forward				
P.5		<u>CONCRETE</u>				
P.5.1		Surface blinding layer under footings and bases (15Mpa/19mm Concrete).	m ³	1		
P.5.2		Surface screeds (20Mpa/19mm), limited to 30mm thick	m ³	1		
P.5.3		25Mpa/19mm Un-Reinforced concrete casting and vibrated for Foundations, floor, footings, aprons etc.	m ³	10		
P.5.4		25Mpa/19mm Reinforced concrete casting and vibrated for Foundations, floor, footings, aprons, etc.	m ³	52		
P.5.5		30Mpa/19mm Un-Reinforced concrete casting and vibrated for Foundations, footings, etc.	m ³	1		
P.5.6		30Mpa/19mm Reinforced concrete casting and vibrated for Foundations, footings, etc.	m ³	1		
P.5.7		Making and testing of 150x150x150mm concrete strength test cubes	no	3		
P.5.8		Concrete Top Surface Finishing: Smooth wood floated finish	m ²	130		
P.5.9		Concrete Top Surface Finishing: Steel Floated Finish	m ²	30		
P.5.10		Charmfers at corners: 19 x 19mm triangular fillet at corners forming	m	230		
P.6		<u>ROUGH FORMWORK</u>				
P.6.2		<u>Temporary Formwork:</u>				
P.6.2.1		To sides, edging, risers, ends and reveals, not exceeding 300mm height	m ²	20		
P.6.2.2		To sides, edging, risers, ends and reveals, not exceeding 600mm height	m ²	46		
P.6.2.5		Suspended slabs shuttering	m ²	80		
P.7.2.6		Reinforced precasted rib and block Slabs as permanent shutters - top ref mesh and concrete topping measured elsewhere	m ²	80		
P.8		<u>CONCRETE JOINTS</u>				
P.8.1		Saw cut joints: 6mm wide x 50mm deep Saw cut joints on top of concrete	m	200		
P.8.2		Joints filling: 6mm silicon seal	m	300		
P		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
P		Brought forward				
P.9		<u>CONCRETE REINFORCEMENT</u>				
P.9.1		High tensile steel reinforcement bars to structural concrete work.	t	0.5		
P.9.2		<u>Fabric reinforcement:</u>				
P.9.2.1		REF. 193 fabric reinforcement in concrete surface beds, raft slabs, aprons etc.	m ²	120		
P.9.2.2		REF. 245 fabric reinforcement in concrete surface beds, raft slabs etc.	m ²	30		
P.10		<u>MASONRY BRICKWORK</u>				
		Supply, Deliver, and Construct Brickwork consisting of solid clay bricks to SABS 227-1986, with 10.5 MPa minimum nominal compressive strength in Class I mortar. (Cement to be 42.5N all-purpose cement):				
P.10.1		Stock Brick 220mm wide (One brick) wall, complete with mortar, ties, etc.	m ²	120		
P.10.2		Stock Brick 110mm wide (Half brick) wall, complete with mortar, ties, etc.	m ²	400		
P.10.5		Brick Samples, Supply and deliver samples for approval	no	1		
		<u>FACE BRICK:</u> FBS clay face brick , bedded and jointed in Class II mortar and pointed with recessed vertical and horizontal joints (Cement to be 42.5N all-purpose cement):				
P.10.8		Supply, Deliver, and Construct Brickwork: Face Brick outside, 110mm wide (Half brick) wall, complete with mortar, ties, pointed outside, etc.	m ²	150		
P.11		<u>BRICKFORCE</u>				
P.11.1		NHBRC Galvanized brickforce: 150 x 2.8 mm	m	2000		
P.11.2		NHBRC Galvanized brickforce: 75 x 2.8 mm	m	600		
P		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
P		Brought forward				
P.13		<u>WATERPROOFING</u>				
P.13.1		Sealing of walls with 1:3 cement and sand mixture	m ²	1		
P.13.2		Sealing of walls with cement sealer clear paint - applied on external bricks	m ²	150		
P.14		<u>LINTOLS</u>				
P.14.1		Pre-Cast Concrete lintols 75 x 110				
P.14.1.1		Lintels 0.9 m	no	5		
P.14.1.2		Lintels 1.2 m	no	8		
P.14.1.3		Lintels 1.8 m	no	4		
P.14.2		Pre-Cast Concrete lintols 75 x 150mm				
P.14.2.1		Lintels 0.9 m	no	8		
P.14.2.2		Lintels 1.2 m	no	1		
P.14.2.3		Lintels 1.8 m	no	2		
P.16		<u>JOINT SEALANTS</u>				
P.16.1		Clear Neutral silicone sealant for joint sealing around windows, door frames, etc.	m	150		
P.16.2		Two-part grey polysulphide sealing compound (10x12mm) including backing cord, bond breaker, primer, etc for joints in floors, walls, etc.	m	200		
P.17		<u>ROOF COVERINGS</u>				
		Galvanised profiled metal sheeting, screws and all accessories, supply and install complete, fixed to roof / cladding members.				
P.17.5		Galvanised IBR profile 0,58mm Z200.	m ²	100		
P.17.6		Galvanised IBR profile 0,3mm for Ceiling making	m ²	1210		
		Galvanised (0.58mm) Flashings, fixed in strict accordance with manufacturer's instructions including installation accessories :				
P.17.7		Mono pitched ridge capping with 225mm lapping secured onto the roof.	m	55		
P.17.8		Ridge cover, 0,58mm.	m	50		
P.17.9		Ridge Closures, 0,58mm ridge closures fixed under the ridge line.	m	50		
P		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
P		Brought forward				
P.18		<u>ROOF INSULATION</u>				
P.18.2		Polyesterene foam of 50mm thickness	m ²	1		
P.18.3		Partition Walls				
		Dry wall erection up to 2,5m height, including all accessories and fixing to floor, water back flash strip at bottom on both sides, water proof lamination.	m ²	50		
P.18.4		Panel walls up to 2,5m height- sandwich made of 1mm thick sheets on both sides of 75mm Polyesterene foam, sheets must factory coated with white enamel. Including fixing to floor and anchoring to other walls	m ²	100		
P.19		<u>PROVISIONAL SUM FOR STEEL STRUCTURES</u>				
P.19.1		Provisional Sum, as specified by the Engineer, for the fabrication, supply, delivery and installations the replacement of damaged roof and cladding sheets, replacement of all roof screws and seals, water guttering system replacement and new positioning to dispose water outside, roof top ventilators installation, etc to have roof water proof and sound.	Prov sum	1	150000	R 120,000.00
		Provisional Sum, as specified by the Engineer, for the application of roof sheets insulation coating using instructed product and methods	Prov sum	1	100000	R 100,000.00
P.19.2		Profit Over item above	%	250000		
P.19.3		Supply and install 75x50x2mm steel purlins under the roof for the installation of IBR roof ceiling, including cleats to existing trusses	m	700		
P.20		<u>CARPENTRY & JOINERY</u>				
		Supply, deliver and install the following Carpentry				
P.20.1		38 x 114mm Wall plate.	m	1		
P.20.2		50 x 76mm Purlins/ Bracing	m	1		
P.20.3		38 x 152mm Rafters.	m	1		
P.20.4		TRI FIX or equal approved hurricane clip fixed using 10 x 32mm galvanised clout nails.	no	1		
P.20.6		"Everite Nutec" or equally approved fibre cement, 85 x 275 x 6mm Barge board drilled and brass screwed to purlin ends including galvanised steel H-profile jointing strips, screws, holes, etc.	m	1		
P		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
P		Brought forward				
P.21		<u>DOORS</u>				
		Supply, deliver and install the following doors complete.				
P.21.1		Frame and ledge open back solid Meranti door, size 813 x 2032mm. (Exterior use)	no	4		
P.21.2		Light Duty Hardboard door, size 813 x 2032mm. (Interior use)	no	12		
P.22		<u>IRONMONGERY</u>				
P.22.1		HINGES: 75 x 100mm Brass Medium duty ball bearing HMP butt hinges.	Pair	15		
P.22.2		LOCKS: "UNION 2277-78SS" or equal approved three lever sash mortice lockset.	no	12		
P.22.3		"UNION 2277-78SS" or equal approved three lever sash mortice lockset.	no	12		
P.22.4		Door indicator bolt satin chrome complete	no	8		
P.22.5		HANDLES: "Dorma DPH301B" or equal approved Stainless Steel Straight Tubular Pull door handle flange fixing.	no	1		
P.22.6		Stainless Steel Hat and coat hook, code DHC - SS-030-A or equal approved.	no	10		
P.22.7		38mm Diameter black rubber door stop plugged and screwed to wall.	no	10		
P.22.8		Overhead surface mounted type door closer with aluminium casing	no	4		
P.23		<u>METALWORK</u>				
		STEEL BURGLAR GATES TO DOORS				
		Security Gate (mild steel) consisting of 25 x 25 x 2mm steel frame with 12mm square bars infill placed at 109mm centres, hung with one pair of galvanised hinges including locks, handles, ironmongery complete and fixed to brickwork:				
P.23.1		Security gate size 900 x 2050mm high	no	4		
P.23.2		Security double gate size 1800 x 2050mm high.	no	1		
P.24		<u>PLASTERING</u>				
P.24.3		INTERNAL PLASTER: 10mm thick, 1:4 sand cement mixture to smooth steel floated finish	m ²	400		
		INTERNAL PLASTER: 10mm thick, 1:4 sand cement mixture to wood finish	m ²	60		
P		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
P		Brought forward				
P.25		<u>PAINTWORK</u>				
P.25.1		Prepare existing steel surfaces (stop, sand down, etc.) and apply one coat primer, one undercoat and two coats eggshell enamel paint (Plascon or equal approved) (exposed Steel structure members, Doors, door frames, windows etc.)	m ²	100		
P.25.2		Allow for working at height to complete all paint repairs, max 8m high	Sum	1		
P.25.3		Prepare and apply weatherproof two coats of primer and on coat of washable paint on plastered walls.	m ²	250		
P.25.4		Prepare by cleaning and scrubbing and apply two coats enamel paint on windows frames, putty, door frames, etc.	m ²	30		
P.25.4		High pressure degreasing and cleaning including disinfection for the floor after upgrade works	m ²	1000		
P.25.5		Application of two coats of floor primer and bonding	m ²	805		
P.25.6		Application of two coats of floor epoxy	m ²	805		
P.26		<u>ROLLER DOORS</u>				
P.26.1		Repairs to Industrial Roller door, Chain operated, 2400 x 6000mm high galvanized with locking mechanism, sealing all holes to prevent birds	no	3		
		Installation of birds and weather proof door straps made of clear PVC strips on all roller entrance doors	Prov sum	3	10000	R 30,000.00
		Profit over above	%	30,000		
P.27		<u>STEEL WINDOW FRAMES</u>				
P.27.1		Supply, deliver and install the following complete steel window frames.				
P.27.3		Window frame NC4F (1511 x 949 mm)	no	2		
P.27.4		Window frame C1H (533 x 949 mm)	no	2		
P.27.5		Window frame NE1 (533 x 359 mm)	no	8		
P.27.6		Window frame NE11 (1975 x 629 mm)	no	2		
P.27.7		Glazing including putty, 3 - 4mm clear glass	m ²	20		
P.27.8		Glazing including putty, 4mm frosted glass	m ²	25		
P		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
P		Brought forward				
P.28		<u>ALUMINIUM WINDOWS</u>				
		Supply, deliver and install the following complete glazed Aluminium windows. Crealco SWIFT 28 or similar approved, powder coated.				
P.28.1		Aluminium Window 600wide x 600 high (PT66E)	no	2		
P.28.2		Aluminium Window 900wide x 600 high (PT96E)	no	2		
P.28.3		Aluminium Window 1200wide x 600 high (PT126E)	no	1		
P.28.4		Aluminium Window 600wide x 900 high (PT69E)	no	1		
P.28.5		Aluminium Window 900wide x 900 high (PT99E)	no	1		
P.28.6		Aluminium Window 1200wide x 900 high (PT129LE)	no	1		
P.30		<u>PRESSED STEEL DOOR FRAMES</u>				
		Supply, deliver & install the following mild steel (1,2mm thick) door frames complete with standard butt hinges and factory applied primer:				
P.30.1		Double rebated frame suitable for half brick (110mm) walls for door 813 x 2032mm high	no	1		
P.30.2		Double rebated frame suitable for one brick (220mm) walls for door 813 x 2032mm high	no	1		
P.30.3		Double rebated frame suitable for one brick (220mm) walls for door 1511 x 2032mm high	no	1		
P.30.4		Combination Door and Frame, Double Door, 1511 x 2 032mm high	no	1		
P.30.5		Combination Door and Frame, Single Door, 813 x 2 032mm high	no	1		
P.31		<u>LOCKS</u>				
P.31.1		Supply 50 mm "Viro" Padlocks and Keys (or equal approved)	no	1		
P.31.2		Three lever double cylinder lockset code 2222 or similar with Gower Handel code CZ682-05 SC complete with striking plate.	no	1		
P.31.3		Four- lever double cylinder lockset, with Gower Handel code CZ682-05 SC or similar complete with striking plate.	no	1		
P.31.4		DMWS-SS-008 or similar Bathroom /WC small case deadlock	no	1		
P.31.5		Aluminium door stop with rubber insert	no	1		
P		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
P		Brought forward				
P,32		<u>SIGNAGE PLATES</u>				
P,32,1		Wheelchair, pictogram Engraved on 152 x 152 mm stainless steel plate.	no	1		
P,32,2		Female, pictogram Engraved on 152 x 152 mm stainless steel plate.	no	1		
P,32,3		Male, pictogram Engraved on 152 x 152 mm stainless steel plate.	no	1		
P.33		<u>OTHER SIGNAGE PLATES</u>				
P.33.1		Prov sum under instruction	Prov Sum	1	20000	R 20,000.00
P.33.2		Profit over above	%	20,000		
P.34		<u>CEILINGS</u>				
		Supply, deliver and install the following ceiling complete with all support and accessories.				
P.34.1		Rhino gypsum plasterboard (6,4mm) with taped and skimmed joints finished with one coat rhinolite plaster, nailed to 38 x 38mm bradering at 350mm centre to centre.	m ²	60		
P.34.2		Trap door (650 x 650mm) complete with trimmers, frame,etc	no	1		
P.34.3		Cornices 60 x 60 mm, Upper Edge Cove Polystyrene including fixtures, etc.	m	80		
		<u>Suspended Ceiling</u>				
		Pre-painted 600 x 1200 x 17mm "Armstrong Fine Fissured 95% RH" or equally approved acoustic panels on aluminium pre-painted exposed tee suspension system including main and cross tees, necessary hangers, grids, etc				
P.34.4		Ceilings suspended not exceeding 0,5m below steel roof trusses	m2	100		
P.35		<u>FLOOR AND WALL TILES</u>				
		Supply, deliver and install Floor and Wall Tiles, inclusive of all adhesive and grouting. Payment will be done on actual area tiled. No extra payment will be done for wastages and cutting of tiles.				
P.35.1		A Grade ceramic floor tiles, 500x500mm, including adhesive cement and grouting.	m ²	120		
P.35.2		A Grade ceramic floor tiles skirting 75mm, including adhesive cement and grouting.	m	200		
P.35.3		Promax Aluminium Square Edge, 8mm or similar approved, including fasteners.	m	45		
P		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
P		Brought forward				
P.35.4		A grade ceramic 200 x 200mm White glazed wall tiles, including adhesive cement and grouting.	m ²	30		
P.36		<u>OTHER TILES</u>				
P.36.1		Mark up on other Tiles as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	50000	R 50,000.00
P.36.2		Mark up on other Tiles.	%	50000		
P.37		<u>HAND RAILS IN TOILETS</u>				
P.37.1		Mark up on Grab Rails as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	15000	R 15,000.00
P.37.2		Mark up on Grab rails.	%	15000		
P.38		<u>FIRE SERVICES</u>				
P.38.1		DCP dry powder portable fire extinguisher (4,5kg), including a formed Saligna Wood backboard size 450 x 100 x 22mm thick plugged and screwed to wall and finished with two coats of polyurethane varnish, including 120 x 20 x 2mm Stainless or Galvanised Steel "J" Wall Bracket.	Set	5		
P.38.2		Fixed type Fire hose reel complete with ID 20mm x 30m PVC hose (SANS 1086), chromium plated stopcock(25mm BSP), shut-off nozzle and wall bracket bolted to wall with and including expansion bolts.	Set	4		
P,39		Factory Outlet Shop				
P,39,1		20ft Ship Container Converted to a factory outlet mini shop including surface preparation and Painting Exterior,	Sum	1		
P,39,2		Ship Container Finish works - Interior walls lamination, Floor lamination with removeable rubber/plastic interlocking carpet blocks , 1 x 900x900mm and 2x 1800x450mm Aluminum windows with burglar bars with window bank flashing, 1 x steel entrance door with SABS approved lock and 2 x 300x300 whirly birds, 1 x sliding door 1570x2200mm and 2x steel checker plate disabled access ramps	Sum	1		
P,39,3		Ship Container Electrical : 6 way DB, 2 x LED lights, 3 DBL plug point, switches ,	Sum	1		
P		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
P		Brought forward				
P,39,4		Allow a sum for constructing a IBR roof hood (carport over the container) and IBR roof car parking	Prov sum	1	50000	R 50,000.00
P,39,5		Profit over above	%	50000		
P,39,6		Allow a sum for Supply and installation of shop display freezer and refrigerator under instruction	Prov sum	1	20000	R 20,000.00
P,39,7		Profit over above	%	20000		
P,40		<u>FLOOR DRAINAGE</u>				
P,40,1		Supply, deliver and install Stainless Floor Trap: PHT DN100 single design, Vertical	Prov Sum	1	12,000.00	R 12,000.00
P,40,2		Supply, deliver and install PHT Stainless Floor Trap with side Box Channels: DN100 Double Industrial Drain (Vertical) + (Equal Length Boxes x 1200 mm)	Prov Sum	1	40,000.00	R 40,000.00
P,40,3		Supply, deliver and install PHT Stainless Floor Trap with side Box Channels: DN100 Double Industrial Drain (Vertical) + (Equal Length Boxes x 3200 mm)	Prov Sum	1	65,000.00	R 65,000.00
P,40,4		Overheads, charges and profit on Items C4.1 to C4.3 above (max 10%)	%	117,000		
P,40,5		Supply, deliver and install Rofo Interceptor Grease Trap: RO GT 2000 (10l/s) or similar	Sum	1		
P,40,6		Supply, deliver and install PVC pipe: 110 mm diameter	m	180		
P,40,7		Supply, deliver and install PVC elbow: 110 mm diameter	no	10		
P,40,8		Supply, deliver and install PVC pipe: T-piece Horizontal 110 mm diameter	no	6		
P,40,9		Supply, deliver and install RAS Drain Assembly or similar	no	4		
P,40,10		Supply, deliver and install Trench Drain Precasted with Grid: Fibre Grating 400 x 700 mm Stainless Floor Trap: PHT DN100 single design or similar, Vertical	no	6		
P,40,11		Supply, deliver and install Trench Drain-end Precasted with Grit: Fibre Grating 400 x 700mm	no	2		
P,40,12		Supply, deliver and install all plumbing from WC's and kitchen to existing network.	sum	1		
P,41		OFFICE EQUIPMENT				
		Grey Windovert/Similar Vertical Blinds				
P,41,1		(a)Size 1.5m x 1.2m	No	2		
P,41,2		(b)Size 0.5m x 1.5m	No	1		
P		Carried forward				

Design, construction, refurbishment and upgrade of existng building facility and installation of sweet potato yoghurt processing machinery for Kgarose Kgaros Pty Ltd at Seshego Industrial Park, in Polokwane

[illegible]

No.	Claus	DESCRIPTION	Unit	Qty	Rate	Amount
		<u>ELECTRICAL AND MECHANICAL</u>				
R.1		<u>ELECTRICAL - GENERAL</u>				
R.1.1		Test the complete electrical works and issue a Certificate of Compliance (CoC) by an applicable certified and registered electrical person.	Sum	1		
R.1.2		Earth Spike (Include Conductor Termination Clamp)	Sum	1		
R.2		<u>ELECTRICAL - TRENCHING & EARTHWORKS</u>				
		Trenching (450mm width by 500mm depth for LV Cables) Danger tape: Orange/Yellow PVC material- 300mm above cable.				
R.2.1		Hand pickable soil (soft soil)	m ³	20		
R.2.2		Machine excavation (soft rock)	m ³	10		
R.3		<u>ELECTRICAL CABLES</u>				
		Supply, deliver, install, and test SABS approved copper cables. Inclusive of all terminations and glands.				
R.3.1		Surfix cable - 1.5mm ² x 2 + Earth (Black, White)	m	40		
R.3.2		Surfix cable - 1.5mm ² x 3 + Earth (Black, White)	m	30		
R.3.3		Surfix cable - 1.5mm ² x 4 + Earth (Black, White)	m	30		
R.3.4		Surfix cable - 2.5mm ² x 2 + Earth (Black, White)	m	30		
R.3.5		Surfix cable - 2.5mm ² x 3 + Earth (Black, White)	m	50		
R.3.6		Surfix cable -21.5mm ² x 4 + Earth (Black, White)	m	50		
R.3.7		Insulated Housewire 1,5mm ² , 1core cable; red, black, yellow, brown, etc	m	50		
R.3.8		Insulated Housewire 2,5mm ² , 1core cable; red, black, yellow, brown, etc	m	20		
R.3.9		Insulated Housewire 4mm ² , 1core cable; red, black, yellow, brown, etc	m	1		
R.3.10		Insulated Housewire 6mm ² , 1core cable; red, black, yellow, brown, etc	m	1		
R.3.11		Bare copper Earth wire (SANS 1411)				
		a) 1.5 mm ²	m	0		Rate Only
		b) 2.5 mm ²	m	0		Rate Only
		c) 4 mm ²	m	0		Rate Only
R		Carried forward				

No.	Claus	DESCRIPTION	Unit	Qty	Rate	Amount
R		Brought forward				
R.4		<u>LIGHT FITTINGS</u>				
		Supply, deliver, install, and test the following SABS approved light fittings complete with bulbs.				
R.4.1		Bulkhead Rectangular, Including 9w LED globe	no	22		
R.4.2		Batten Fitting 1,2m (4Ft) for 2 LED lamps, Including 2 x 18 w LED lamps	no	3		
R.4.3		Dust / Damp Proof 1,2 (4Ft) 2 LED lamps (Frosted UV stabilized polycarbonate), Including 2 x 18 LED lamps.	no	20		
R.5		<u>OTHER LIGHT FITTINGS</u>				
R.5.1		Mark up on other Light fittings as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	30000	R 30,000.00
R.5.2		Mark up on other Light Fittings.	%	30000		
R.6		<u>ENCLOSURES</u>				
		Supply, deliver, install, and test the following Enclosures complete with fittings, etc.				
R.6.1		Wall Box 100 x 50mm (4 x 2)	no	1		
R.6.2		Wall Box 100 x 100mm (4 x 4)	no	1		
R.6.3		Indoor 24 Way DB Box, steel and coated, flash mounted.	no	1		
R.6.4		Indoor 12 Way DB Box, steel and coated, flash mounted.	no	1		
R.6.5		Indoor 6 Way DB Box, steel and coated, flash mounted.	no	0		Rate Only
R.6.6		Supply, deliver, and install, Mild Steel, Single Door, Lockable Enclosure, IP66, Out door, Powder coating, Including Galvanized Mounting plate.				
		a) 200 H x 200 W x 155 D mm	no	1		
		b) 300 H x 250 W x 155 D mm	no	0		Rate Only
		c) 350 H x 250 W x 155 D mm	no	1		
R.7		<u>OTHER ENCLOSURES</u>				
R.7.1		Mark up on other Enclosures as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	10000	R 10,000.00
R.7.2		Mark up on other Enclosures.	%	10000		
R		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
R		Brought forward				
R.8		<u>ELECTRICAL SWITCHGEAR</u>				
		Supply, deliver, install, and test the following Electrical Switchgear, etc.				
R.8.1		Main switch (60Amp)	no	1		
R.8.2		Earth Leakage circuit breaker (63Amp)	no	1		
R.8.3		Overload with Earth Leakage circuit breaker (63Amp)	no	1		
R.8.4		Circuit breaker (10Amp)	no	2		
R.8.5		Circuit breaker (15Amp)	no	2		
R.8.6		Circuit breaker (20Amp)	no	1		
R.8.7		Circuit breaker (25Amp)	no	2		
R.8.8		Circuit breaker (30Amp)	no	2		
R.8.9		Surge Protection breaker	no	1		
R.8.10		Waterproof Industrial 3phase socket, Eurolux or similar	no	6		
R.8.11		Single socket 3 pin wall plug, 15Amp	no	5		
R.8.12		Double socket 3 pin wall plug, 15Amp	no	5		
R.8.13		2 Lever 1 way light switch	no	1		
R.8.14		3 Lever 1 way light switch	no	1		
R.9		<u>CONDUIT PIPES</u>				
		Supply, deliver, and install the following Conduit pipes, inclusive of all couplings, adaptors, bends, etc.				
R.9.1		PVC Conduit 20mm (Inclusive of all fittings)	m	1		
R.9.2		PVC Conduit 25mm (Inclusive of all fittings)	m	1		
R.9.3		Steel Galv Conduit 32mm (Inclusive of all fittings)	m	50		
R.9.4		Suspended Truncking tray - rectangular, 150mm wide	m	100		
R.10		<u>OTHER ELECTRICAL MATERIAL</u>				
R.10.1		Mark up on other Electrical Material as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	50000	R 50,000.00
R.10.2		Mark up on other Electrical Material.	%	50000		
R		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
R		Brought forward				
		<u>PLUMBING AND SEWAGE</u>				
R.11		<u>Supply, deliver, install, and test the following sanitary fixtures.</u>				
R.11.1		Miami Close Couple Toilet Suit or similar approved, complete with all fittings.	no	4		
R.11.2		Solo Tamarin Basin and Full Pedestal or similar approved, complete with all fittings.	no	8		
R.11.3		Icon Urinal Large or similar approved, complete with all fittings.	no	2		
R.11.4		Supply & install shower head complete with chrome shower arm & Rose, and all accessories to control valves for hot and cold water	no	4		
R.11.5		Supply & install 450x600x6mm "GG"QUALITY POLISHED GLASS MIRROR: Fixed with round nose chromium plated mirror screws.	no	4		
R.11.6		Mark up on other Bathroom Accessories as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	50000	R 50,000.00
R.11.7		Mark up on other Bathroom Accessories.	%	50000		
R.12		<u>Sewage Pipeline: Supply, deliver, install, and test complete pipelines inclusive of all bends, couplings, saddles, etc.</u>				
R.12.1		Sewage pipe, 50mm PVC, including all fittings.	m	30		
R.12.2		Sewage pipe, 110mm PVC, including all fittings.	m	80		
R.12.3		Mark up on other sewer fittings as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	5000	R 5,000.00
R.12.4		Mark up on other sewer fittings.	%	5000		
R.13		<u>Polycop pipes: Supply, deliver, install (Chased into brickwalls), and testing, including joints, bends, sockets, and etc.</u>				
R.13.1		Poly cop pipe 15mm	m	100		
R.13.2		Poly cop pipe 20mm	m	100		
R.13.3		Polycop pipe Joints, Bends, Tees, etc. for 15mm pipe	no	30		
R.13.4		Poly Cop pipe Joints, Bends, Tees, etc. for 20mm pipe	no	30		
R		Carried forward				

No.	Clauses	DESCRIPTION	Unit	Qty	Rate	Amount
R		Brought forward				
R.14		<u>OTHER PIPES AND FITTINGS</u>				
R.14.1		Mark up on other pipes & fittings as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	20000	R 20,000.00
R.14.2		Mark up on other Pipes and Fittings.	%	20000		
R.15		<u>VALVES</u>				
		Supply, deliver, install, and test the following valves.				
R.15.1		Pressure control valve for 600kPA, on 15 or 20mm pipes	no	1		
R.15.2		15mm Ball-o-stop valve.	no	1		
R.15.3		22mm Non Return valve.	no	1		
R.16		<u>HOT WATER GEYSERS</u>				
		Electric element and Dual Solar geysers, complete with waste water tray, anchoring and plumbing inlet and outlet adapters, fitted with isolator switch, with temperature and pressure safety relief valve, vacuum breaker, draincock.	no	1		
R.16.1		Dual Solar and Electric element geyser, 200 Litres, complete	no	2		
R.16.2		Supply all necessary testing apparatus, water, materials, etc. and allow for testing of all plumbing works and issue Certificate of Compliance (COC)	no	1		
R.17		<u>WATER PURIFICATION PLANTS</u>				
		Provide a sum for supply and installation of combined system of Filtering, Reverse Osmosis System, Chlorinator, UV treatment, Disinfection chamber, and De-ironizing Chamber by a specialist as instructed by engineer	PC Sum	1	250000	R 250,000.00
R.17.3		Profit over above	%	250000		
R		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
R		Brought forward				
R.19		<u>AIR CONDITIONING SYSTEM</u>				
		Supply, deliver, install and test complete air Conditioning unit, wall mounted, inclusive of all electricals, pipes, etc.				
R.19.1		9000 BTU complete air Conditioning unit, wall mounted	sum	2		
R.19.2		12000 BTU complete air Conditioning unit, wall mounted	sum	1		
R.19.3		Building HVAC system, as specified by the Engineer (3 Quotations from reputable suppliers, by local supplier firms within the municipality for better repairs and maintainance purpose).	PC Sum	1	400000	R 400,000.00
R.19.4		Mark up on Item above	%	400,000		
R0.20		<u>Cold Rooms</u>				
		Panel Walls with Doors				
R,20,1		3 x (5mx5mx3,6m height) rooms, positioned in next to each other, including wall panels, sliding doors, roof support; made of sandwiche Polystyrene insulated panels of 75mm wide, lined by 1mm thick enamel coated sheets	m2	400		
		Coldrooms equipment				
R,20,2		Coldroom mechanical equipment installation and commissioning, as specified by the Engineer (3 Quotations from reputable suppliers, by local supplier firms within the municipality for better repairs and maintainance purpose).	PC Sum	1	380,000	R 380,000.00
		Mark up on Item above	%	380,000		
R21		<u>Prefabricated Galvanized steel water reservoir</u>				
		Prefabricated Galvanized food grade HDPE lined steel water reservoir complete with roof, internal ladder, external cat ladder with safety cage, 1x inlet (50 mm) including galvanized steel inlet pipe and fittings, outlet (80 mm) including valve, overflow, manhole, scour valve, whirlybird or similar approved ventilator, water level indicator, concrete ring beam or slab with Engineers Certificate were applicable and PVC lining in the following size categories:				
R,21,1		300 000 Litres capacity	Sum	1		
R0.22		<u>Steel Tank Stand</u>				
		Supply and erect a prefabricated complete elevated steel tank stand (painted) with Engineers Certificate suitable for a 10 000-storage tank:				
R,22,1		3 meter high for 10 000 litres	sum	4		
R		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
R		Brought forward				
		<u>Polyethylene Water Tank</u>				
		Supply, erect and anchored elevated polyethylene water tank onto tank stand (3, 6 or 9m high):				
		10 000 Litres LDPE Tank includig HDPE pipes and fittings for inlet and delivery connections and overflow	sum	4		
R.21		<u>PROVISIONAL SUMS for Processing Equipment</u>				
R.21.1		Allow for a provisional sum for Mechanical/Electrical or processing Equipment for Fabrication and installation of Sweet potato wash trough, rollers with brush, elevator, spray run, including all control systems, by a specialist or manufacturing contractor.	Prov Sum	1	450000	450,000.00
R.21.2		Profit over above	%	450,000		
R.21.3		Allow for a provisional sum for Mechanical/Electrical or processing Equipment for Fabrication and installation of Sweet potato Sorting roller line with tables, knives, work tools , including all control systems, by a specialist or manufacturing contractor	Prov Sum	1	50000	50,000.00
R.21.4		Profit over above	%	50,000		
R.21.5		Allow for a provisional sum for Mechanical/Electrical or processing Equipment for Bottle packaging and purification plant, including all control systems, by a specialist or manufacturing contractor.	Prov Sum	1	3700000	3,700,000.00
R.21.6		Profit over above	%	3,700,000		
R.21.7		Allow for a provisional sum for Mechanical/Electrical or processing Equipment for Blender, cooker, pastuerizer, flavouring tank, mixing tanks including all control systems, by a specialist or manufacturing contractor.	Prov Sum	1	3350000	3,350,000.00
R.21.8		Profit over above	%	3,350,000		
R.21.9		Allow for a provisional sum for Mechanical/Electrical or processing Equipment for Sweet Potato Boiler and supprting equipment, including all control systems, by a specialist or manufacturing contractor.	Prov Sum	1	1550000	1,550,000.00
R.21.10		Profit over above	%	1,550,000		
R.21.11		Allow for a provisional sum for Mechanical/Electrical, processing Equipment, processing inputs instructed by the engineer to have processing complete , including packaging materials	Prov Sum	1	350000	350,000.00
R.21.12		Profit over above	%	350,000		
		TOTAL SECTION "R" CARRIED FORWARD TO SUMMARY				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
<u>SECTION S : POWER GENERATION EQUIPMENT, FENCING</u>						
S.1		<u>SOLAR SYSTEM</u>				
		Supply, deliver, install, and test, Pure sine wave inverter complete with: AC/DC compatibility, Overvoltage and undervoltage protection, Overload protection and overcurrent protection, Overtemperature protection, No-load protection, Operating history memory, Detachable control panel, Enclosure class IP66, Automatic generator start, Display of function.				
S.1.1		Pure sine wave inverter 25kVA	sum	1		
S.1.2		Other inverter under instruction	Prov Sum	1	200000	200,000.00
S.1.3		Mark-up on Item above	%	200000		
S.1.4		Supply and install DC Circuit breakers and surge protector	sum	2		
S.1.5		Supply and install Combined Junction Box for solar panels	sum	2		
S.1.6		Supply and install array to array cable for solar panels: Flexible single core cable for photovoltaic or solar systems, Halogen free, double insulated, zone & UV resistant (AC 1000V & DC 1500V) (Black/Red)				
		a) 1.5 mm ²	m	30		
		b) 2.5 mm ²	m	50		
		c) 4 mm ²	m	20		
S.2		<u>SOLAR PANELS (PV)</u>				
		Supply, deliver, install, and test monocrystalline solar panels complete with all cables, connectors, Junction boxes, surge protectors and Circuit breakers. (Ground, Roof, Elevated or floating installation)				
S.2,1		d) 500 to 550 W	no	32		
S.3		<u>SOLAR (PV) MOUNTING SYSTEMS</u>				
		Supply, deliver, install a complete Solar (PV) mounting system including all rails, brackets, fasteners, and steel support structure. (Galvanised or Aluminium)				
S.3.1		<u>Roof Top mounting system for PV Solar panels.</u>				
		d) PV solar panels mounting system	per/ panel	32		
S		Carried forward				

S		Brought forward				
S.3.6		<u>Solar DB Board</u>				
		Supply, deliver, install, and test complete solar DB Board				
S.3.6.1		Complete combiner box, MCE CB1-1, 32 A, 1000 VDC, Input Strings 1, Output Strings 1	Sum	1		
S.3.6.2		Complete combiner box, MCE CB2-2, 60 A, 1000 VDC, Input Strings 2, Output Strings 2	Sum	1		
S.3.7		<u>Batteries</u>				
S.3.7.1		Mark up on the supply, installation, and testing of Batteries for power control units switching as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	100000	R 100,000.00
S.3.7.2		Mark up on Item above	%	100000		
S.3.8		<u>Other Solar Equipment</u>				
S.3.8.1		Mark up on other Solar Equipment set as instructed by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	60000	R 60,000.00
S.3.8.2		Mark up on other Solar Equipment.	%	60000		
S.4		<u>FUEL GENERATORS</u>				
		Supply, deliver, install, test, and commission diesel generators with electric start, automatic voltage regulator, and automatic transfer switch.				
S.4.1		50kVA, including 300 litres for commissioning	sum	1		
S.4.2		2000 litres diesel fuel tank with stand, fuel line, gauge, meter, water drain, vapor release, etc to be compliant to Fuel storage regulation, provide COC, include 300 litres for commissioning	sum	1		
S.4.3		<u>Other Fuel Generators</u>				
S.4.3.1		Mark up on other Fuel Generator set as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	50000	R 50,000.00
S.4.3.2		Mark up on other Fuel Generator.	%	50000		
S.4.4		<u>Service of Electrical Power Equipment</u>				
S.4.4.1		Mark up on the Service and maintain of Power Equipment during retention period of 12 months	PC Sum	1	75000	R 75,000.00
S.4.4.2		Mark up on the Service and repair of Generators.	%	75000		
S		Carried forward				

S		Brought forward				
S.6		<u>GRID POWER SUPPLY</u>				
S.6.1		Mark up on the replacement, upgrade or installation of power grid line and transformers by a Eskom registered contractor as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	150000	R 150,000.00
S.6.2		Mark up on Item above	%	150000		
S.7		INVINSIBLE FENCING				
		Clea View Fence installation for Distance of : Invisible mesh security fencing all materials supply and installation:				
S.7.1		1, Powder -coated security fencing 2400mm high above ground level, of ref 3510-3D mesh panels fabricated from absel with a strength of 60% and a tensile strength of 500N/mm ² , with core diameter of 3mm and a tolerance of 0,07mm, with 4 no, 43mm V-rpofiled horizontal stiffeners, fixed to and including 76x45x3mm by 3000mm length galvanized and powder coated steel posts with rubber cap on top, planted in concrete (concrete elsewhere). Fencing panels fixed between posts including galvanized and powder coated fixators and nuts at centres not exceeding 300mm.	m	100		
S.7.2		2, Galvanized anti-burrow fencing, 500mm deep below ground level, secured into 25MPa concrete for posts and haunching of 200x200x200mm at 1000mm centres maximum, of ref 3510-3D mesh panels fabricated from absel with strength of 60% and tensile strength of 500N/mm ² , with core diameter of 3mm and a tolerance of 0,07mm,	m	100		
S.7.3		3, Powder coated anti-climb structure spiked rail bolted to invisible fence mesh flang along fence top	m	100		
S.7.4		4, Gates fabrication using 100x75x3mm galvanized and powder coated for frame. Panel covered with clear view ref 3510-3D mesh. Hinged or on track rail including locking mechanism.	PC Sum	1	40000	R 40,000.00
S.7.5		Mark up on Item above	%	40000		
		TOTAL SECTION "S" CARRIED FORWARD TO SUMMARY				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
<u>SECTION I : PUMPS & MOTORS, CONTROLS & ELECTRICAL CABLES AND WATER PIPES</u>						
T.1		<u>Flexible pipe - reinforced clear/visible food grade pipe to Processing equipment supplies and delivery</u>				
		Supply, deliver and install flexible pipe, complete with all applicable fittings to connect to the water take off points and supply points				
T,1,1		a) 50 mm inside diameter	m	50		
		<u>STEEL PIPES AND FITTINGS</u>				
		Supply, deliver, install, and test the following steel pipes, fittings, and specials complete. (Conforming to SABS 719, SABS 62-1989 and BS534.) (All steel pipes and fittings to be galvanized according to SABS 1461 and SABS ISO 14713.)				
T.1,2		Stainless steel food grade pipes fabrication and installation by specialist as instructed by the engineer.	Prov Sum	1	100000	R 100,000.00
		Mark up on Item above	%	100,000		
T.2		<u>Close coupled centrifugal pump and motor (Three phase, 2 pole motor)</u>				
		Supply, deliver, install and test the following three phase close coupled end-suction centrifugal pump and motor (2 pole) complete with cast iron impeller, and cast iron & coated casing. (Including trimming of the Impeller)				
T.2.1		Suction - 50mm; Discharge - 32mm; Impeller - 125mm (Q - 25 ³ /h; H - 23m; P - 2,2kW) for water distribution and Potato wash sump water reticulation	set	3		
T.2.3		Mark up on other Close coupled pump and motor set.	Prov Sum	1	40000	R 40,000.00
		Mark up on Item above	%	40000		
T.3		<u>Valves</u>				
T.3,1		Mark up on Valves as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	30000	R 30,000.00
T.3,2		Mark up on other Valves.	%	30000		
T		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
T		Brought forward				
T.4		<u>Other Electrical motor.</u>				
T.4.1		Mark up on other Electrical motor as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	70000	R 70,000.00
T.4.2		Mark up on other Electrical motor.	%	70000		
T.5		<u>ELECTRICAL - GENERAL</u>				
T.5.1		Test the complete electrical works and issue a Certificate of Compliance (CoC) by an applicable certified and registered electrical person. For all water and processing circulation pumps and motors	sum	1		
T.5.2		Electrical Power Connection Fee under instruction and account handling	Prov Sum	1	100,000	R 100,000.00
T.5.3		Handling Cost and profit in respect of Item T.11.2	%	100,000		
T.6		<u>ELECTRICAL - TRENCHING & EARTHWORKS</u>				
		Trenching (450mm width by 1500mm depth for LV Cables)				
T.6.1		Hand pickable soil (soft soil)	m ³	10		
T.6.2		Machine excavation (soft rock)	m ³	10		
T.6.3		Hard rock (Hydraulic Breakers, Blasting)	m ³	3		
T.6.4		Back-filling and compaction to 90% Mod AASHTO	m ³	20		
T.6.5		Sifting of local soil for bedding of the cables	m ³	15		
T.6.6		Import soil for bedding of cables	m ³	15		
T		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
T		Brought forward				
T.7		<u>Electrical Motor Control and Starters</u>				
		Supply, deliver, install, and test a complete DB Board in a lockable IP55 powder coated mild steel enclosure (or similar approved by Engineer) for a pump and motor set with all applicable switch gear and starters with protections for Dry run, Pump stall, Overload, Under voltage, Over voltage, Phase failure, Phase rotation and short circuit. Inclusive of all wiring, terminations, and glands.				
		Included on the processing equipment installations				
		Other Electrical Motor Control and Starters				
T.7,1		Mark up on other Electrical motor Control and Starters as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	50000	R 50,000.00
T.7,2		Mark up on other Electrical motor Control and Starters.	%	50000		
T8		<u>Electrical Cables</u>				
T.8,1		Two Core Armoured copper cable (SANS 1507)				
		a) 1.5 mm ²	m	500		
T.8,2		Two Core Armoured copper cable with Earth continuity Conductor in the armour. (SANS 1507)				
		a) 1.5 mm ²	m	500		
		b) 2.5 mm ²	m	250		
		c) 4 mm ²	m	100		
		d) 6 mm ²	m	10		
		e) 10 mm ²	m	5		
		f) 16 mm ²	m	5		
		g) 25 mm ²	m	5		
		h) 35 mm ²	m	5		
		l) 50 mm ²	m	5		
T		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
T		Brought forward				
T.8,3		Three Core Armoured copper cable with Earth continuity Conductor in the armour. (SANS 1507)				
		a) 1.5 mm ²	m	1		
		b) 2.5 mm ²	m	1		
		c) 4 mm ²	m	1		
		d) 6 mm ²	m	1		
		e) 10 mm ²	m	1		
		f) 16 mm ²	m	1		
		g) 25 mm ²	m	1		
		h) 35 mm ²	m	1		
		l) 50 mm ²	m	1		
		Four Core Cable				
		Supply, deliver, install and test four core SABS approved copper cables. Inclusive of all terminations and glands.				
T.8,4		Four Core Submersible pump cable (SANS 1574)				
		a) 1.5 mm ²	m	1		
		b) 2.5 mm ²	m	1		
		c) 4 mm ²	m	20		
		d) 6 mm ²	m	20		
		e) 10 mm ²	m	1		
		f) 16 mm ²	m	1		
		g) 25 mm ²	m	1		
		h) 35 mm ²	m	1		
		l) 50 mm ²	m	1		
T		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
T		Brought forward				
T.8,5		Four Core Armoured copper cable (SANS 1507)				
		a) 1.5 mm ²	m	1		
		b) 2.5 mm ²	m	1		
		c) 4 mm ²	m	1		
		d) 6 mm ²	m	1		
		e) 10 mm ²	m	1		
		f) 16 mm ²	m	1		
		g) 25 mm ²	m	1		
		h) 35 mm ²	m	1		
		l) 50 mm ²	m	1		
T.8,6		Four Core Armoured copper cable with Earth continuity Conductor in the armour. (SANS 1507)				
		a) 1.5 mm ²	m	1		
		b) 2.5 mm ²	m	1		
		c) 4 mm ²	m	1		
		d) 6 mm ²	m	1		
		e) 10 mm ²	m	1		
		f) 16 mm ²	m	50		
		g) 25 mm ²	m	20		
		h) 35 mm ²	m	1		
		l) 50 mm ²	m	1		
		Supply, deliver, install and test SABS approved copper cables. Inclusive of all terminations and glands.				
T.8,7		Bare copper Earth wire (SANS 1411)				
		a) 1.5 mm ²	m	1		
		b) 2.5 mm ²	m	1		
		c) 4 mm ²	m	1		
T		Carried forward				

No.	Clause	DESCRIPTION	Unit	Qty	Rate	Amount
T		Brought forward				
		d) 6 mm ²	m	1		
		e) 10 mm ²	m	1		
		f) 16 mm ²	m	1		
		g) 25 mm ²	m	1		
		h) 35 mm ²	m	1		
		l) 50 mm ²	m	1		
T.8,8		Building Earthing and Lightning Protection and Other Electrical Cables to Equipment and Rooms and Fittings points for the whole facility				
T.8,9		Mark up on other Electrical works under instruction (3 Quotations from reputable suppliers or specialists)	PC Sum	1	300000	R 300,000.00
T.8,10		Mark up on other Electrical Cables.	%	300000		
T,9		Manual On-Line screen filters complete with Stainless-steel screen and drain valve (10 bar max)				
T,9,1		50mm Filter with minimum 25 m ³ /h flow, 100 - 500 micron screen, Filtration Surface minimum 800 cm ²	no	2		
T,10		<u>Supply deliver and install the following water meters</u>				
		<u>Cast Iron , Epoxy coated (Flange Table D)</u>				
T,10,1		a) 50 mm, complete with flanges	no	1		
T,11		<u>Other Water Meters and Pipeline accessories</u>				
T,11,1		Mark up on other Water Meters as specified by the Engineer (3 Quotations from reputable suppliers)	PC Sum	1	25000	R 25,000.00
T,11,2		Mark up on other Water Meters.	%	25000		
		TOTAL SECTION "T" CARRIED FORWARD TO SUMMARY				

Design, construction, refurbishment and upgrade of existing building facility and installation of sweet potato yoghurt processing machinery for Kgarose Kgaros Pty Ltd at Seshego Industrial Park, in Polokwane

SCHEDULE J : DRILLING OF BOREHOLES

Item Nr.	Payment Refer.	Description	Unit	Qty	Rate	Amount
J2		<u>DRILLING OF BOREHOLES</u>				
J2.1	SANS 1200C	<u>SITE ESTABLISHMENT</u>				
J2.1.1	8.2.1	Clear and grub 3m wide for access road	m	0		Rate Only
J2.1.2		Mobilisation and set up of plant to/at first borehole	Sum	1		
J2.1.3		Set-up of plant per boreholes (after first) up to 10km	No	0		Rate Only
J2.1.4		Interhole moves For distances more than 10km	km	0		Rate Only
J2.1.5	8.2.5	Take down and reinstate existing fences with written approval of the Engineer. (Provisional)	m	0		Rate Only
		<u>DRILLING: (Unconsolidated and consolidated sediments and igneous, metamorphic and fractured carbonate rocks)</u>				
J2.2		Rotary air percussion with foam - 0 to 150m				
J2,2,1		165mm diameter	m	0		Rate Only
J2,2,2		203 to 220mm diameter	m	150		
J2,2,3		254mm diameter	m	0		Rate Only
J2,2,4		305mm diameter	m	0		Rate Only
J2.3		Odex (including supply, delivery & installation of at least 6 mm sidewall Odex casing)				
J2,3,1		194 mm OD (including casing)	m	0		Rate Only
J2,3,2		219 mm OD (including casing)	m	0		Rate Only
J2,3,3		273 mm OD (including casing)	m	0		Rate Only
		<u>DRILLING (Highly abrasive rocks e.g. quartzite)</u>				
J2.4		Rotary air percussion with foam – 0 to 150 m				
J2,4,1		165mm diameter	m	0		Rate Only
J2,4,2		203 to 220mm diameter	m	60		
J2,4,3		254mm diameter	m	0		Rate Only
J2,4,4		305mm diameter	m	0		Rate Only
Total Carried Forward						

Design, construction, refurbishment and upgrade of existing building facility and installation of sweet potato yoghurt processing machinery for Kgarose Kgaros Pty Ltd at Seshego Industrial Park, in Polokwane

SCHEDULE J : DRILLING OF BOREHOLES (continue)

Item Nr.	Payment Refer.	Description	Unit	Qty	Rate	Amount
		Brought Forward				
		<u>DRILLING (Leached / cavernous carbonate rocks)</u>				
J2.5		Rotary air percussion with foam				
J2,5,1		165mm diameter	m	0		Rate Only
J2,5,2		203 or 216mm diameter	m	0		Rate Only
J2,5,3		254mm diameter	m	0		Rate Only
J2,5,4		305mm diameter	m	0		Rate Only
J2.6		Odex (including supply, delivery & installation of at least 6 mm sidewall Odex casing)				
J2,6,1		194 mm OD (including casing)	m	0		Rate Only
J2,6,2		219 mm OD (including casing)	m	0		Rate Only
J2,6,3		273 mm OD (including casing)	m	0		Rate Only
		<u>CASING (supplied, delivered and installed)</u>				
J2.7		Steel (bevel-edged plain)				
J2,7,1		165 mm ID (minimum wall thickness 4 mm)	m	0		Rate Only
J2,7,2		215 mm ID (minimum wall thickness 4.5 mm)	m	30		
J2,7,3		254 mm ID (minimum wall thickness 4.5 mm)	m	0		Rate Only
J2.8		Steel (slotted, width 3-4 mm)				
J2,8,1		165 mm ID (minimum wall thickness 4 mm)	m	0		Rate Only
J2,8,2		215 mm ID (minimum wall thickness 4.5 mm)	m	0		Rate Only
J2,8,3		254 mm ID (minimum wall thickness 4.5 mm)	m	6		
J2.9		UPVC (flush internal/external thread-jointed, plain)				
J2,9,1		165 mm ID (minimum wall thickness 7 mm)	m	0		Rate Only
J2,9,2		181 mm ID (minimum wall thickness 8.5 mm)	m	0		Rate Only
J2,9,3		203 mm ID (minimum wall thickness 6mm)	m	120		
J2,9,4		227 mm ID (minimum wall thickness 11 mm)	m	0		Rate Only
Total Carried Forward						

Design, construction, refurbishment and upgrade of existing building facility and installation of sweet potato yoghurt processing machinery for Kgarose Kgaros Pty Ltd at Seshego Industrial Park, in Polokwane

SCHEDULE J : DRILLING OF BOREHOLES (continue)

Item Nr.	Payment Refer.	Description	Unit	Qty	Rate	Amount
		Brought Forward				
J2.1		UPVC (flush internal/external thread-jointed, perforated)				
J2,10,1		127 mm ID (minimum wall thickness 6 mm)	m	0		Rate Only
J2,10,2		150 mm ID (minimum wall thickness 6 mm)	m	0		Rate Only
J2,10,3		165 mm ID (minimum wall thickness 7 mm)	m	0		Rate Only
J2,10,4		181 mm ID (minimum wall thickness 8.5 mm)	m	0		Rate Only
J2,10,5		203 mm ID (minimum wall thickness 9.1 mm)	m	0		Rate Only
J2,10,6		227 mm ID (minimum wall thickness 11 mm)	m	12		
J2.11		CASING SHOES				
J2,11,1		To fit 165 mm ID steel casing	m	0		Rate Only
J2,11,2		To fit 215 mm ID steel casing	m	0		Rate Only
J2,11,3		To fit 254 mm ID steel casing	m	6		
J2.12		REAMING OF BOREHOLES				
J2,12,1		152 mm or 165 mm to 203 mm or 219 mm diameter	m	0		Rate Only
J2,12,2		203 mm or 219 mm to 254 mm diameter	m	0		Rate Only
J2,12,3		152 mm or 165 mm to 254 mm diameter	m	60		
J2.13		RECOVERY OF STEEL CASING	m	0		Rate Only
J2.14		FORMATION STABILISER (supplied, delivered and installed) 5-8mm well rounded silica gravel	kg	24		
J2.15		CONCRETE COLLAR (complete per borehole) (2 m x 2 m x 0.5 m)	No	1		
J2.16		BENTONITE SANITARY SEAL (complete per borehole) (maximum of 5m)				
J2,16,1		Type I (305 mm hole & 254 mm ID casing)	No	1		
J2,16,2		Type II (305 mm hole & 215 mm ID casing)	No	0		Rate Only
J2.17		BOREHOLE DISINFECTION (complete per borehole)	No	1		
J2.18		BOREHOLE PROTECTION (complete per borehole) (including casing lid)	No	1		
Total Carried Forward						

Design, construction, refurbishment and upgrade of existing building facility and installation of sweet potato yoghurt processing machinery for Kgarose Kgaros Pty Ltd at Seshego Industrial Park, in Polokwane

SCHEDULE J : DRILLING OF BOREHOLES (continue)

Item Nr.	Payment Refer.	Description	Unit	Qty	Rate	Amount
		Brought Forward				
J2.19		STONE PLUG (for unsuccessful boreholes) 3m casing installed and concrete block constructed around casing. Must be marked clearly dry on casing lid)	No	1		
J2.2		BOREHOLE MARKING (complete per borehole) 300 mm x 200 mm x 3mm thick rectangular steel plate (complete with concrete embedment)	No	1		
J2.21		DATA RECORDING AND REPORTING (complete per borehole to include: GPS coordinates, penetration rates, logs)	No	1		
J2.22		DEVELOPMENT of BOREHOLE (also for blow yield)	Hr	1		
J2.23		BOREHOLE YIELD WATER TESTING Set-up of Plant, installation of yield testing pump, discharge pipes, Stepped discharge test, Borehole Disinfections	Sum	1		
J2,23,1						
J2.24		Professional Services Sum for compensation for comprehensive Geohydrological report Hydrogeologist for Geophysical investigations (sitting report,	PC			
J2,24,1		Geophysical field work, reporting, water quality and , yield test, supervision and traveling expenses during construction.	Sum	1	-	R 25,000.00
J2,24,2		Charges and profit on above items	%	25000		
TOTAL SCHEDULE J CARRIED FORWARD TO SUMMARY						