

ANNEXURE A: THE BILL OF QUANTITIES - BID-NUMBER: NRMDP/NW-T02/2020

1 GREATER TAUNG

Delivery Address: Taung Custom Feeding project
Mogopela B Village
Taung.

GPS Coordinate: 27°26'04.1" S 24°46'36.1" E

Contact Person: Mr. David Mopelwa and Mr. Morris Ncee

1.1 Supply and Deliver New mechanization for Grater Taung CFP: Specification

No	Product description	Quantity	
1.	NEW 31-40 kw 4 WD tractor with safety belts, at least 4 cylinders, front and rear weights, set of hitch pins, Original Model engine, 4 port hydraulic remote system, 540 RPM independent PTO, ROPS with sunroof.	1	
2.	NEW 1 Trailed Hammermill with intake mechanisms	1	
3.	NEW 7 cubic meter wagon feed mixer with scale	1	
Total			

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1.2 Supply and deliver raw material for feed mixing in Greater Taung

FEED FOR 150 CATTLE	kg/day	days	Kg/day	Tons
One animal	9,6	120	1 152,00	1,15
150 Animals	1440	120	172 800,00	172,80
Procurement plan	Feed mix quantities	Total required ingredients for 150 (tons)		
Feed Mixing (150)				
Hay	12,5%	21,60		
High Protein Concentrate	5,5%	9,50		
Hominy Chop/ maize	48,5%	83,81		
Beef fat 33	20,0%	34,56		
Wheat bran	1,5%	2,59		

- Hay 21,60 tons
- High Protein Concentrate 9,50 tons
- Hominy Chop/ maize 83,81 tons
- Beef fat 33 34,56 tons
- Wheat bran 2,59 tons

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1.3 Sighting, Drilling, Equipping, Pump testing of the borehole and fencing of the Borehole site

The service provider is expected to tender on, and if appointed, to perform the following activities:

1.3.1 Sighting

The sighting of the borehole (to a minimum of three test holes) is to be conducted by a hydrologist. The hydrologist must prepare a brief report outlining at least, the possibility of finding water; the most probable depth of finding water; the most probable rate of water flowage expected; and the exact co-ordinates of the borehole site. This report must be submitted to the project manager at the Department of Rural Development and Land Reform (DRDLR). If it is found that there exists a reasonable chance of finding water, the project manager will instruct the service provider to proceed with the drilling and equipping.

1.3.2 Drilling

The drilling is to be done in accordance with regulations as stipulated by the District Water Authority. Drilling is to be quoted for up to a depth of 250m with casing and the minimum drilling depth at any site should not be less than 50m. A detailed breakdown of drilling costs should be attached in the event of drilling depth exceeding 120m or less than 120m. The service provider should recommend the most applicable back-generator for pumping and the most applicable long-term electrical power supply & connection (to the borehole) in the drilling report.

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1.3.3 Drilling Certificate

Issue signed and stamped certificates on the conditions of the newly drilled borehole inclusive of drilling depth and casing depth and yield test results

1.3.4 Water Quality

Conduct water quality tests, for the purposes of determining suitability for human consumption, must be carried out in accordance with regulations as stipulated by the District Water Authority; and submit a signed and stamped statement of results of which must be handed over to the project manager from the DRDLR.

1.3.5 Equipping

Each borehole should be equipped with two (2) 10 000 litre capacity PVC storage tanks, each mounted on steel stands permanently fixed on the in-situ concrete slab and the stands and concrete works should be structurally certified by a registered structural engineer. A structural certificate of compliance should be submitted to the DRDLR Project Manager for approval. Each borehole is to be connected to an electrical point powered by a back-up generator which is to be supplied by the contractor under recommendation from the drilling report. An electrical certificate of compliance should be submitted for the electrical connection of the borehole to the back-up generator for approval by the DRDLR Project Manager (RID).

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1.3.6 Pump Testing

A pump test is to be conducted after drilling, in accordance with regulations as stipulated by the District Water Authority, the results of which must be handed over to the project manager from the DRDLR. Test and issue certificate for the conditions of the boreholes in the following:

- Pipes
- Valves
- Fittings

1.3.7 Site Clearance and In-Situ Concrete Floor Slab

The storage tanks are to be situated next to the borehole on a combined area of 7.5m x 5m. The digging up and removal of rubbish, debris, vegetation, hedges shrubs and trees not exceeding 200mm girth, is to be undertaken to the area where the borehole and storage tank sites will be situated.

Earth filling from prescribed stock piles on site or filling supplied by the contractor is to be compacted to 93% Mod AASHTO density on the stipulated area. Soil poison is to be applied to the compacted surface area. Mesh 193 Reinforcement is to be placed on a Damp-proof Membrane covering an area of 7.5m x 5m. Smooth formwork is to be undertaken along the identified perimeter of 7.5 x 5m. 25 Mpa 16mm Concrete is to be cast within the formwork to a depth of 150mm depth; concurrently cleared of air bubbles with a drive unit and power-floated to attain a smooth surface finish.

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1.3.8 Fence

A fence with a lockable gate will enclose the perimeter of the borehole and mounted storage tanks for a combined area of 7.5m x 5m for security purposes. The digging up and removal of rubbish, debris, vegetation, hedges shrubs and trees not exceeding 200mm girth and width of 1.5 meter, is to be undertaken to the area where the fence will be erected.

1.3.9 Back-Up Generator

Appointed contracting service provider is to supply, install/connect and operate a back-up generator and test its performance that is suitably conditioned to power-up the installed electrical borehole pump (inclusive of all electrical components required to connect borehole pump to back-up generator).

1.3.10 Project Schedule

a) Phase 1

Phase 1 will incorporate sighting and drilling for Taung Agripark for identifying water, testing of the water and certification of drilling. This approach will be undertaken to satisfy the requirements attached to the Water User License applications and these applications need to be submitted to Department of Water and Sanitation as the lead agent for project to be implemented at the above-stated Agri-park sites. These activities will be undertaken in Quarter 2 of the 2020/21 Financial Year.

b) Phase 2

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Phase 2 will include the equipping of the boreholes, testing of the pump, construction of the concrete floor slab, instillation of the water storage tanks on erected steel stands; instillation of electrical power point for connecting the borehole pump to the back-up generator (which will be supplied during the pumping testing phase) and enclosing the borehole and storage tanks with fencing. Phase 2 will commence once all security arrangements have been concluded with the relevant district offices towards safe-guarding the newly constructed infrastructure. These activities will be undertaken in Quarter 2 of the 2020/21 Financial Year.

1.3.11 Other Related Costs.

All other related costs must be stipulated in the bid e.g. transport to site.

1.3.12 Tender structure

A detailed price breakdown is required, if scope of work might change.

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1.4 Supply and Deliver Storage Construction material and Construct the storage facility as per the specification below

LOW ROOF STORE - (35m x 20m)						
Project name:						Coordinates:- S: °
District: Dr RSM						Coordinates:- E: °
Locality: Mogopela A (Greater Taung)						
CIDB GRADING: 2CE						
Background/Deliberation: This is a supply, deliver and install invite. It entails construction and repair of existing pivot as per attached quantity schedule and as per additions alluded to during site briefing session - if any.						
QUANTITY SCHEDULE -						
Nr	Item	Description	QTY	UNIT	RATE	AMOUNT
1	SITE ESTABLISHMENT	This should include transportation of tools and machinery to the site, construction of temporal shelter and removal as per	1	count		
2	BULK AND RESTRICTED EXCAVATION	Clearance of the area of the site to be built upon of all grass, weeds, shrubs, trees with trunks not exceeding 200 mm girth,	1	count		
		Rip and scarify the top surface of existing formation to a depth of 150 mm (make provision for the geotechnical survey) and dispose as per the engineer's instruction.	880	m ²		
		Excavate 800 x 800 x 500mm deep trenches for pad footing foundations and dispose to site.	6,4	m ³		
		Excavate 500mm wide x 400mm deep trenches for strip footing foundations and dispose to site.	26,8	m ³		
		Allow for intermediate, hard rocks and boulder excavation as per site conditions	18	m ³		
		Back filling to under floors, trenches, apron, loading ramps etc. with G5 or any approved material supplied and carted onto site by the Contractor, and spread, level, water, and compact in 150 mm layers to density of at least 95% Mod. AASHTO	396	m ³		
3	SOIL POISONING	Supply and apply soil poisoning in accordance with SANS 5859				
		To bottom and sides of trenches, holes, etc	198,8	m ²		
		Under floors, ramps and apron	880	m ²		
4	CONCRETE AND REINFORCING	25mPa for all - Please adhere to the concrete mixing proportions as per SANS 10400				
		Foundation for I-sections (800mm x 800mm x 500mm)	7,68	M ³		
		Foundation-Strip footing (500mm x 300mm)	21,9	M ³		
		Floorslab - 200mm with construction joints as per the drawings provided	168	M ³		
		Concrete shoulders at main entrance - Loading ramps	19	M ³		
		Concrete shoulders/ apron around the structure (600mm wide)	12	M ³		
		Ref.193 for floor and entrance area - (refer to the drawings attached)	65	count		
		R8 Stirrups @300 mm c/c for strip footings as per the drawings provided	150	kg		
		Y12 reinforcing bars for strip and pad footing as per the drawings provided	710	kg		

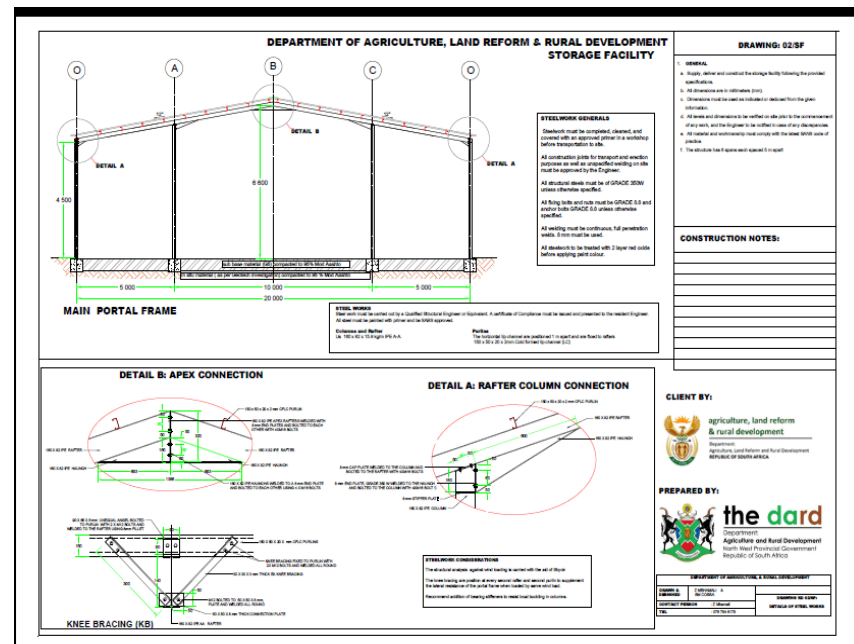
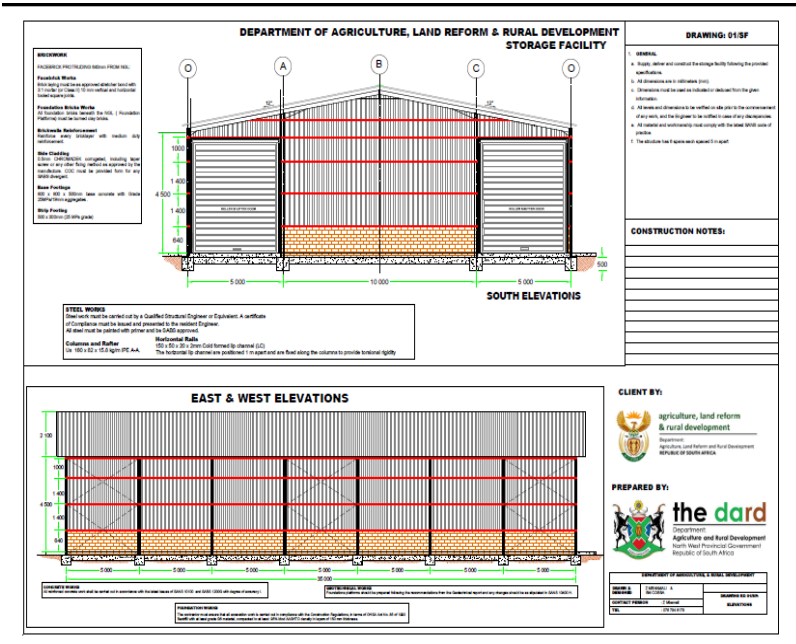
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5	FOOTPLATE	300mm x 250mm x 10mm - Welded on IPE Pillar	20	count		
6	STIFFER PLATE	This plate is to be welded (8mm fillet) on top of the columns to connect the rafter flanges 8.0mm Thick, Grade 350WA plate in connections including holes etc.	20	count		
7	PILLARS	IPE A-A - 160mm x 82mm x 15,8kg/m ³ - Refer to the drawings provided	104	m		
8	BEAMS/RAFTER	IPE A-A - 160mm x 82mm x 15,8kg/m ³ - Refer to the drawings provided	167	m		
9	WEBCUTS	IPE A-A - 160mm X 82mm X 15,8kg/m ³ - Refer to the drawings provided	42	m		
10	PURLINS	150mm x 50mm x 20mm x 2mm - Lipped channel rafters	1078	m		
11	BOLTS AND WELDING CONNECTIONS	This must include cutting, bolting and welding items according to specifications and drawings provided. SANS standards	1	sum		
12	HOLDDOWN BOLTS	20mm Diameter 4-point anchor bolts 800mm long with supporting plate. Refer to the drawings provided	80	count		
13	ROOF CLADDING	0.5mm Corrugated roof sheets - A gabled roof with not less than 300 mm overhangs and the total slanting length of the roof is 10,52m . The total surface area of the roof of the structure is used for quantifying. This item must be inclusive of all the necessary fitting accessories. Refer to the drawings provided for dimensions	644	m ²		
14	WALL CLADDING	0.5mm Corrugated roof sheets - The total surface area of the wall to be cladded with corrugated sheeting is used for quantifying. This item must be inclusive of all the necessary fitting accessories. Refer to the drawings provided for dimensions	328	m ²		
15	RIDGE	Galvanized roof ridge - 6m long 7 sheets of 6m each to allow for overlapping	7	count		
16	TEKSCREWS	75mm Tek screws - all corrugated attachments 19mm Bounded washers - Tek screw washers	10000	count		
17	DAMP COURSE	Double - before bricklaying may commence SANS 952 compliant 250 micron Consol Plastics Gunplas damp proofing USB sheet (0.25mm)	134	m		
18	BRICKS	Mottled rustic or similar (prior approved by Regional Engineer)	9500	count		
19	BRICK FORCE	SABS double - Each and every second layer of bricks	260	m		

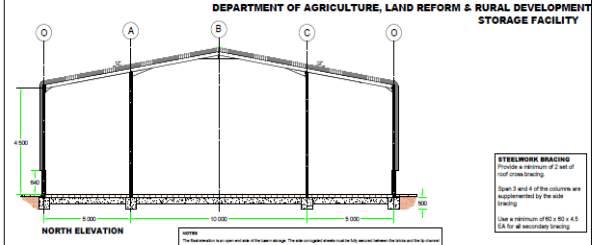
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20	WIND REINFORCING	60 x 60 x 4x 4 kg/m equal angle sections for roof sag bars, intermediate and side bracing. Refer to the drawings provided.	350	m		
		M12 nut and washer - refer to the drawings provided	300	count		
		50 x 8 x 3.14 kg/m Flat bar for knee bracing. Refer to the drawings provided.	12	m		
		30 x 30 x 3 x 1.36 kg/m EA for knee bracing. Refer to the drawings provided.	40	m		
21	BUILDMIX	Building sand - bricklaying purpose	14	m ³		
		Cement - bricklaying purpose	55	count		
22	DOORS	Galvanised roller shutter door with frames and relevent fittings (Dimensions : 4880 x4500 high mm) Refer to the drawings provided. (These should be industrial doors with a thickness not less than 1mm)	2	count		
23	PROFESIONAL FEES FOR Structural Engineer	Preparation of shop detailed drawings and supervision of the fundation and the portal frame installation	1	PC Sum		
			Subtotal:			
			Add 10%			
			Subtotal:			
			Labour			
			Transport			
			Sub total			
			15% VAT			
			Subtotal:			
			Grand Total:			
Construction period in order to complete the project (working days)						
Compulsory site inspection			Yes		Signature:	
Name of Company:						
Contact - Name and Tel.nr"s						
Date:						
Full Name:						
Designed and Compiled By:						
Mr Z Mbhamali : District Enginee -Dr RSM						
Date:						

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ANNEXURE A: THE BILL OF QUANTITIES - BID-NUMBER: NRM DP/NW-T02/2020



**DEPARTMENT OF AGRICULTURE, LAND REFORM & RURAL DEVELOPMENT
STORAGE FACILITY**

DRAWING: 03/SF

GENERAL:

1. Fully define and control the storage facility following the provided specifications.
2. All dimensions are in millimeters (mm).
3. Dimensions not specified for a particular section shall be given in brackets.
4. All structural dimensions to be verified on site prior to the commencement of any work, and all changes to be notified in case of any discrepancy.
5. All materials and workmanship must comply with the latest SANS 10400 code of practice.
6. The structure shall appear neat & clean.

STEELWORK BRACING:
Provide a minimum of 2 sets of roof cross-bracing.
Span 3 and 4 of the columns are supported by the side bracing.
Use a minimum of 80 x 80 x 4.5 SA for all secondary bracing.

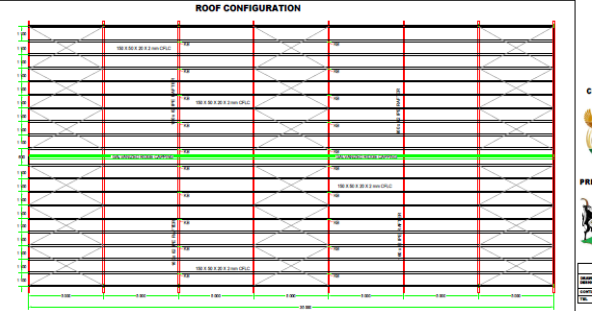
CONSTRUCTION NOTES:

CLIENT BY:
agriculture, land reform & rural development
Department of Agriculture, Land Reform and Rural Development
Republic of South Africa

PREPARED BY:
the dard
Department of Agriculture and Rural Development
South West Provincial Government
Republic of South Africa

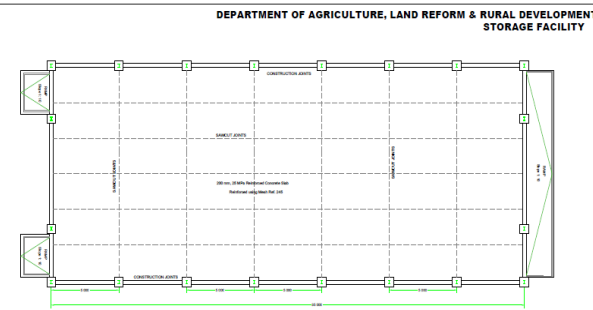
DEPARTMENT OF INFRASTRUCTURE DEVELOPMENT

PROJECT: **STORAGE FACILITY**
DRAWING: **03/SF**
DATE: **2020/07/01**



ROOF CONFIGURATION

Diagram showing roof truss structure with dimensions and labels for various components like rafters, purlins, and bracing.



**DEPARTMENT OF AGRICULTURE, LAND REFORM & RURAL DEVELOPMENT
STORAGE FACILITY**

DRAWING: 04/SF

GENERAL:

1. Fully define and control the storage facility following the provided specifications.
2. All dimensions are in millimeters (mm).
3. Dimensions not specified for a particular section shall be given in brackets.
4. All structural dimensions to be verified on site prior to the commencement of any work, and all changes to be notified in case of any discrepancy.
5. All materials and workmanship must comply with the latest SANS 10400 code of practice.
6. The structure shall appear neat & clean.

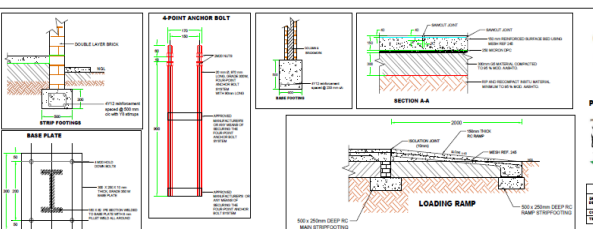
CONSTRUCTION NOTES:

CLIENT BY:
agriculture, land reform & rural development
Department of Agriculture, Land Reform and Rural Development
Republic of South Africa

PREPARED BY:
the dard
Department of Agriculture and Rural Development
South West Provincial Government
Republic of South Africa

DEPARTMENT OF INFRASTRUCTURE DEVELOPMENT

PROJECT: **STORAGE FACILITY**
DRAWING: **04/SF**
DATE: **2020/07/01**



4 POINT ANCHOR BOLT
BASE PLATE
SECTION A-A
LOADING RAMP

Technical drawings showing structural details for anchor bolts, base plates, and loading ramps with dimensions and material specifications.

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1.5 Procurement and installation of solar panels at the top of the storage roof

Supply and install the following:

- a) E006 – Small Electricals (Fuses, DB, CABLE)
- b) FRM42 – SOLAR PANEL FRAME FOR 42 X 260W PANELS
- c) T001 - Travelling
- d) INST4 – INSTALLATION 4
- e) EC103C – ELECTRIC CABLE (SUBMERSIBLE 10MM X 3 CORE)

1.6 Supply, deliver and install of Solar lights

Supply and install the following:

- DGM-60REW – 60W SOLAR FLOOD LIGHT X 6
- 6 x 9 m Steel poles for mounting of the lights
- Digging of 6 x 0.6m holes and planting of poles and tighten with cement and concrete

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1.7 Repair and re-enforcement of kraals, feeding and water troughs (including the passages)

a) Supply, deliver and construct shade for animals drinking troughs

Item	Quantity or process
6m Treated poles (100-120mm)	36
Cement (all purpose)	100
River sand (cubic metres)	60
Crush stone (19mm)	80
Canvas Material	240m
Cable wire	200m

b) Construct 6m radius Cement apron around water troughs x 5

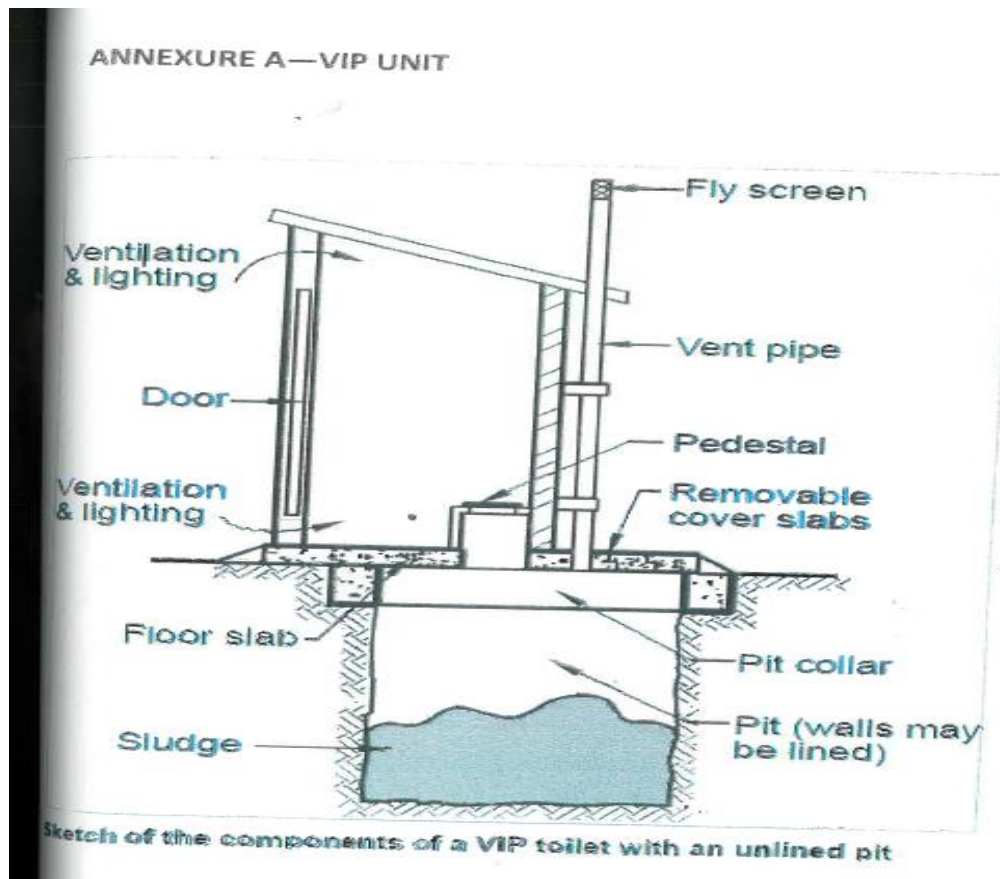
c) Reinforcement of the kraal by tightening of poles around the kraal with the 4-strand cable wire

1.8 Supply, deliver and install two VIP lockable toilets for males and females

- Single pit VIP toilet structure complete with GRC roof and wall panels
- 75mm GRC floor slab
- Pivot type galvanized steel door
- Approved pit lining

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- -VIP pedestal with seat and lid including 110mm vent pipe.
- Excavate 1,7m x 1,7m x1m pit



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2 JERICHO CFP

Delivery Address: *Jericho Custom Feeding project
Jericho Village*

GPS Coordinate: *25°19'34.5" S 27°49'54.4'E*

Contact Person: *Mr. David Mopelwa and Mr. Moses Mokaila*

2.1 Supply and Deliver New mechanization for Jericho CFP: Specification

No	Product description	Quantity	Total Amount
1.	NEW 31-40 kw 4 WD tractor with safety belts, at least 4 cylinders, front and rear weights, set of hitch pins, Original Model engine, 4 port hydraulic remote system, 540 RPM independent PTO, ROPS with sunroof.	1	
2.	NEW 1 Trailed Hammermill with intake mechanisms	1	
3.	NEW 7 cubic meter wagon feed mixer with scale	1	
Total			

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2.2 Supply and deliver raw material for feed mixing in Jericho

FEED FOR 150 CATTLE	kg/day	days	Kg/day	Tons
One animal	9,6	120	1 152,00	1,15
150 Animals	1440	120	172 800,00	172,80
Procurement plan	Feed mix quantities	Total required ingredients for 150 (tons)		
Feed Mixing (150)				
Hay	12,5%	21,60		
High Protein Concentrate	5,5%	9,50		
Hominy Chop/ maize	48,5%	83,81		
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- Hay 21,60 tons
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- Hominy Chop/ maize 83,81 tons
- Beef fat 33 34,56 tons
- Wheat bran 2,59 tons

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2.3 Supply, deliver and install of Solar lights

Supply and install the following:

- DGM-60REW – 60W SOLAR FLOOD LIGHT X 6
- 6 x 9 m Steel poles for mounting of the lights
- Digging of 6 x 0.6m holes and planting of poles and tighten with cement and concrete

2.4 Fixing the Drinking troughs

- Sealing and floor Waterproofing of eight drinking troughs (1x 5m surface)
- Supply and Installation of water ball valves x 8

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3 MOHEELO

Delivery Address: *Moheelo Custom Feeding project*

GPS Coordinate: *25° 54'54.4"S 25° 05'20.6"E*

Contact Person for directions: *Mr. David Mopelwa and Mr. Gopolang Kgosiemang*

3.1 Supply, deliver and Reinforce Moheelo kraals, feeding and water troughs & loading ramp

Supply and deliver the following material:

20	Heavy Duty Farm Gate
70	Gumpoles 125mm x 2,7m
70	Gumpoles 75mm x 2,4m
60	Round Tubing 2mm x 6m
1	Bolts & Nuts with washers
3	Galvanised Wire 2mm x 50kg
1	Binding Wire 315mm x 50kg
50	Cement
1	River Sand 1 x 6m ³
1	Crushed Stone 1 x 6m ³
50	Steel Cutting Disc
1	Welding Rods @ 5kg's

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a) Repair one the loading ramp

- Planting of gum poles, fitting the 3m gates in place.
- Welding of cross tubing, repairs of ramp floor.

b) Crushing pen repairs

- Planting of gumpoles,
- Fitting of the 3 m gates
- Welding of cross tubing
- Casting of concrete floor for scale.
- Replacing of broken poles
- Tightening of poles around the kraal with the 4-strand cable wire

3.2 Supply, deliver sealing material and reseal the feeding troughs

-Repairs, resealing and backwash of feeding troughs floor.

3.3 Supply, deliver drinking troughs sealing material and repair the five (5) drinking troughs

- Construct 6m radius Cement apron around water troughs x 5
- Sealing and floor Waterproofing of five drinking troughs (1x 5m surface)

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3.4 Cleaning, fixing and operationalize of the bore hole.

- Removing of old mono rods
- Cleaning of the borehole
- Re-casing of borehole
- Equipping of the borehole with mono rods
- Operationalize the borehole

3.5 Repair and service of the Diesel engine (used for pumping water).

- Purchasing of lister diesel engine
- Fit and connect the engine
- Testing the engine.

3.6 Repair the main entrance gate.

- Removing of old gate
- Replacing of gate posts
- Replacing of gate rail
- Strengthening and fitting of gate
- Ensure that the gate is working properly