ANNEXURE "A"

BILL OF QUANTITIES

GREATER KOKSTAD MUNICIPALITY

OPERATIONS, MANAGEMENT AND MAINTENANCE OF KRANTZFONTEIN LANDFILL SITE

SECTION 1 : PRELIMINARY AND GENERAL

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	TOTAL PRICE
1		**SECTION 1 : PRELIMINARY & GENERAL**				
1,1		**FIXED CHARGES**				
1.1.1		Contractual Requirements.	Sum	1		
1.1.2		Establishment of Facilities on the Krantzfontein Landfill Site	Sum	1		
		De-establishment from the Krantzfontein Landfill Site	Sum	1		
FIXED CHARGES						
1,2		**TIME RELATED CHARGES**				
1.2.1		Contractual Requirements	Months	36		
1.2.2		General Responsibility	Months	36		
1.2.3		Management of Recycling facility and Recyclers	Months	36		
1.2.4		Compile and complete comprehensive Operations and Maintenance Manual and update every six months as required	Sum	1		
1.2.5		Contractor's obligation in respect of Occupational Health & Safety Act	Sum	1		
TIME RELATED CHARGES						

SECTION 2 : LANDFILL OPERATIONS

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	TOTAL PRICE
2		**SECTION 2: LANDFILL OPERATIONS** **LANDFILL OPERATIONS**				
2,1		Fixed monthly costs for provision of plant, personnel, equipment, handlining of waste required to achieve the scope of work (Excluding suitable cover material i.e. builders' rubble, clean soil) in one calendar month.	Months	36		
2,2		Acceptance and handling of waste such as builder's rubble which is suitable for cover material and/or the construction of temporary site road	Tons/month	30 000		
2,3		Import cover material from borrow pit and spread	m³/month	30 000		
2,4		Regravelling and maintenance of 2km access road to and within the site roadswith 150mm thick gravel layer (G5).	m³	7100		
2.5		Transport of contaminated runoff water or leachate to treatment facility off site	m³	2000		
2,6		Pumping of leachate to reduce level at leachate dam by pumping leachate and transport it to a treatment facility located +_ 5km from the site.	Provisional sum			R200 000
		Item 2.6 should include supply of Diesel and the operator for the pump and contractors handling costs and profit in respect of item 2.6	%			
2.7		Annual landfill site audit (external)	Provisional sum			R500 000
		External auditor to be appointed in consultation with the client. Handling cost and profit in respect of item 2.7	%			
2.8		Provision o quarterly independent professional services for landfill compliance monitoring against the operational licence conditions.	Provisional sum			R600 000
		Independent professional services to be appointed in conjunction /consultation with the client. Handling cost and profit in respect of item 2.8	%			

LANDFILL OPERATIONS						
3		**SECTION 2: LANDFILL OPERATIONS MANAGEMENT OF RECYCLING FACILITY AND RECYCLERS**				
3.1		Supply of protetive clothing (Safety Boots, rubber Gloves, winter jackets,bush hats, raincoats, beanie hats and Dust Musk) for fifty (50) people.	No.	150		
3.2		Laminated Identity cards for 50 People	No.	150		
3.3		Management of recycling facility and recycling.	Months	36		
3.4		Provision and servicing of chemical two (2) toilets for the recyclers	Months	36		
MANAGEMENT OF RECYCLING FACILITY AND RECYCLERS						
4		**SECTION 2: LANDFILL OPERATIONS FENCING , BUILDING AND SIGN BOARDS**				
4.1		**FENCING AND BUILDING**				
4.1.1		Maintainance and replacement of coil razor wire including strand wire.	m	2000		
4.1.2		Repair of infrastructure around the site including weighbridge and SCADA software (including calibration and once off training)	Provisional Sum			R400 000
4.2		**SIGN BOADS**				
4.2.1		Supply, install and maintain notice boards and signage as and when required (metal board treated poles and concrete to stabilise the signage)	Provisional sum		2	R150 000
FENCING, BUILDING AND SIGN BOARDS						

SECTION 3: COMPOSTING FACILITY OPERATIONS

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
5		**SECTION 3: COMPOSTING FACILITY OPERATIONS** **COMPOSTING OPERATIONS AND ORGANIC WASTE MANAGEMENT**				
5.1		**Preparation of Composting Area**	Size Length-16 meters Width 3 meters			
5.1.1		Clearing, levelling and preparation of designated composting area including establishment of compost windrow pads and drainage to prevent stormwater contamination.				
5.1.2		Provision and maintenance of internal access for compost handling equipment				
5.2		**Organic Waste Reception and Sorting**				
5.2.1		Acceptance, inspection and sorting of organic waste including garden refuse, green waste, wood waste and biodegradable material suitable for composting				
5.2.2		Removal and separation of non-organic contaminants such as plastics, metals, glass and rubble from compost feedstock				
5.3		**Shredding and Size Reduction of Organic Material** Finishing top surfaces of concrete to a broom swept non-slip				
5.3.1		Mechanical shredding of garden refuse, branches and wood waste using industrial shredder to produce suitable particle size for composting				
5.3.2		Supply, operation and maintenance of shredding equipment including fuel, operator and routine maintenance				
5.4.		**Formation of Compost Windrows**				
5.4.1		Mixing of shredded organic material to achieve appropriate carbon-to-nitrogen ratio and moisture balance for composting				
5.4.2		Formation and management of compost windrows including placement, shaping and spacing of windrows				

5.5		**Composting Process Management**				
5.5.1		Turning and aeration of compost windrows using suitable plant (e.g. front-end loader or windrow turner) to maintain aerobic conditions				
5.5.2		Moisture control through watering of compost piles where required to maintain optimum decomposition conditions				
5.5.3		Monitoring of compost temperature and decomposition process to ensure effective biological breakdown				
5.6		**Screening and Processing of Finished Compost**				
5.6.1		Screening of matured compost material using mechanical screen to remove oversized material				
5.6.2		Reprocessing of oversized material through shredding and reintroduction into compost process				
5.7		**Storage and Distribution of Compost Product**				
5.7.1		Stockpiling and management of finished compost product within designated storage area				
5.7.2		Loading and handling of compost material for use by the municipality or distribution to the public				
5.8		**Operational Management of Composting Facility**				
5.8.1		General supervision and management of composting operations including environmental compliance and operational records				
5.8.2		Routine maintenance and housekeeping of composting area including control of odours, pests and litter				
COMPOSTING FACILITY OPERATIONS						

SUMMARY OF BILL OF QUANTITY

SECTION	DESCRIPTION	AMOUNT
1	**SECTION 1 : PRELIMINARY & GENERAL**	
	FIXED CHARGES	
	TIME RELATED CHARGES	
2	**SECTION 2: LANDFILL OPERATIONS**	
	LANDFILL OPERATIONS	
	MANAGEMENT OF RECYCLING FACILITY AND RECYCLERS	
	FENCING , BUILDING AND SIGN BOARDS	
3	**SECTION 3 : CONSTRUCTION OF RECYCLING FACILITY**	
	CONSTRUCTION OF RECYCLING FACILITY	
4	**CONTINGENCY WORK (10%)**	
	SUB -TOTAL INCLUSIVE OF CONTINGENCY WORK (10%)	
5	**SECTION 5 : PROVISIONAL SUMS**	
	15% VAT	
	GRAND TOTAL AMOUNT	