

MAKONDE CEMENTI

LID

1.0

EXD

The approved project has fulfilled the investment requirements, which are: -

- (a) Minimum finance investment threshold has been exceeded, the project expects to invest US\$ 32.057
- (b) Legal entity has been incorporated under certificate No. 63428 of 12/12/2007

Based on the above, the letter of approval is hereby submitted for signature in order for the project to comply with the requirements of Section 17 of Tanzania Investment Act, 1997.

Submitted for signature.



N. A. Senzia
DIF
19th December 2008

2.0

EXD

In response to the TIC letter of registration dated 15th Dec 2008

the project has submitted the required documents namely: -

- (a) Company Board Resolution.
- (b) Reference letter/Financing from Nakuru Bank of Commerce
- (c) Letter from District Mtwara District to evidence of land.

With the above submission EXD is requested to sign Certificate of Incentives No. 04.16.15 herein attached.

3/6/09

3 DIF - ref F17



DIF

I do recommend the refund to be made as per the request on P17.
Submitt

CPJ
08/12/10

4.

DAF

Px report on per ms and fitz and to be ready

Subs Pk

DIF

12/10/2010

5.

Neets P 17-24

Use process request as per request

Amr




13/12/10

6

Neets P 18

A request change must be in favour of
Nationale Development Co who paid
to us the money and not otherwise
Impor from secretariat

Amr
02/12/10

ORDER FORM/ Price Listing	From:-	Les Alford / Jabiru Aircraft SA
Shadow Lite C.C. CK1991/024054/23 CAA Licence L14 & 909 T/A JABIRU AIRCRAFT S.A. P.O. Box 2540, George 6530  Tel: (+27)- 044 - 876 9991 / 2 Fax: (+27)- 044 - 876 9993 Cel: (+27)- 082 881 8499	Wish Upon A  JABIRU	Physical Address Aviation Area Site 22 George Airport National Road George  email: info@jabiru.co.za Web: www.jabiru.co.za Aus Web: www.jabiru.net.au Date: January 2008

CUSTOMER DETAILS			
Name:	Neil Garden - NAT INVESTMENTS LTD & Makonde Cement Ltd		
Tel: (Work)	00 255 783 669 644	Tel: (Home)	00 255 783 669 644
Cel:	as above	Fax:	
e-mail:	neil@makondegrouptz.com		
Postal Address	P.O.Box 767, Mtwara, Tanzania		

Please ensure that you contact the factory directly to confirm prices - Prices may change without notice
 This price list is an interactive list on email - email jabiru@yebo.co.za for a copy.

Place an "X" in this column for each item you require (gray box included with Kit)	Present Average exchange rate for the Rand to the Australian Dollar & For some instruments - Extras US\$									
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>R/AUS\$ Exchange Rate</td> <td style="text-align: right;">0.15</td> </tr> <tr> <td>US\$ Exchange Rate</td> <td style="text-align: right;">9.7</td> </tr> <tr> <td>NZ\$ Exchange Rate</td> <td style="text-align: right;">0.1907</td> </tr> <tr> <td>Nedbank date</td> <td style="text-align: right;">23-04-2008</td> </tr> </table>	R/AUS\$ Exchange Rate	0.15	US\$ Exchange Rate	9.7	NZ\$ Exchange Rate	0.1907	Nedbank date	23-04-2008
R/AUS\$ Exchange Rate	0.15									
US\$ Exchange Rate	9.7									
NZ\$ Exchange Rate	0.1907									
Nedbank date	23-04-2008									

ITEM	R	Order R
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AIRFRAME KIT - FOR KIT BUILDERS			
J SERIES - Bigger Body two seat and Four seat Jabiru Aircraft		All prices increased by AU\$ 250.00	
Fitted standard with 120hp Jabiru engine & Wet wings		Due to engine increase as of 01-10-2008	
Model J160 WET	FAT BOY - 2 Seater 85hp Engine Wet wings 135	AUD 58,050.00	R 387,000.00
Model J160 WET	FAT BOY - 2 Seater 120hp Engine Wet wings 135	AUD 62,800.00	R 418,666.67
	Less Engine 85hp FWF- for those kit builders wanting airframe only	-AUD 12,750.00	R -85,000.00
	Less Engine 120hp FWF kit - for those kit builders wanting airframe only	-AUD 17,750.00	R -118,333.33
120hp eng	Model J200	Cargo aircraft - same as J400 no back seats	AUD 64,323.10 R 428,820.67
	Model J250	Cargo Aircraft - with stol Wings	AUD 66,323.10 R 442,154.00
	Model J230	Cargo Aircraft with different wing with winglets	AUD 65,323.10 R 435,487.33
	Model J400	Four seat aircraft	AUD 68,423.60 R 456,157.33
	Model J450	Four seat aircraft with stol wings	AUD 70,228.10 R 468,187.33
	Model J430	Four seat with different wing with winglets	AUD 69,450.00 R 463,000.00
	Less Engine FWF kit - for those kit builders wanting airframe only	-AUD 17,750.00	R -118,333.33

FULLY BUILT JABIRU AIRCRAFT - FACTORY BUILT				Kit	Build Cost
J SERIES - Bigger Body two seat and Four seat Jabiru Aircraft					
Fitted standard with 120hp Jabiru engine & Wet wings					
Model J160 WET	FAT BOY - 2 Seater 85hp Engine Wet wings 135		R 387,000.00	R 55,000.00	
Model J160 WET	FAT BOY - 2 Seater 120hp Engine Wet wings 135		R 418,666.67	R 55,000.00	
120hp eng	Model J200	Cargo aircraft - same as J400 no back seats	R 428,820.67	R 65,000.00	
	Model J250	Cargo Aircraft - with stol Wings	R 442,154.00	R 65,000.00	
	Model J230	Cargo Aircraft with different wing with winglets	R 435,487.33	R 65,000.00	
	Model J400	Four seat aircraft	R 456,157.33	R 65,000.00	
	Model J450	Four seat aircraft with stol wings	R 468,187.33	R 65,000.00	R 533,187.33
	Model J430	Four seat with different wing with winglets	R 463,000.00	R 65,000.00	

INSTRUMENTS			
Air Speed Indicator	X	included in airframe kit	R 0.00
Altimeter	X	included in airframe kit	R 0.00
Vertical Speed Indicator	X	included in airframe kit	R 0.00
Slip / Skid	X	included in airframe kit	R 0.00
Compass	X	included in airframe kit	R 0.00

AVIONICS			
R 4000.00 credit towards radio of your choice	X	included in airframe kit	R 0.00

INSTRUMENT PANEL			
Standard Helicopter Type Panel	X	included in airframe kit	R 0.00

UNDERCARRIAGE			
Medium (600x6 Mains, 500x6 Nosewheel) (alternate / Swop Price) Can swop out to bigger tyres but spats will not fit	X	included in airframe kit	R 0.00

OTHERS

3 point Seat Harnesses (CASA Approved)	X	included in airframe kit	R 0.00
2 x Snap vents in two seat and 4 x Snap vents in four seat	X	included in airframe kit	R 0.00
Red & Green Wing tip running lights (Local)	X	included in airframe kit	R 0.00
Strobe Light Single on Fin (Local)	X	included in airframe kit	R 0.00
Landing Light - single on nose leg	X	included in airframe kit	R 0.00
ENGINE INSTRUMENTS			
Tachometer - built in hourmeter	X	included in airframe kit	R 0.00
Oil Pressure	X	included in airframe kit	R 0.00
Oil Temperature	X	included in airframe kit	R 0.00
Dual Cylinder Head Temp Gauge & Probes	X	included in airframe kit	R 0.00
Dual Exhaust Gas Temperature Gauge & Probes	X	included in airframe kit	R 0.00
Hourmeter	X	included in airframe kit	R 0.00
DOCUMENTATION			
Construction Manual - CD	X	included in airframe kit	R 0.00
Flight Manual	X	included in airframe kit	R 0.00
Service Manual - CD	X	included in airframe kit	R 0.00
Parts Catalogue - CD	X	included in airframe kit	R 0.00
What is included in the standard factory build by Shadow Lite C.C.			
Interior Painted	X	included in Factory Build	R 0.00
Blue Tinted windows and Windscreen	X	included in Factory Build	R 0.00
Fire retardant applied on upholstery	X	included in Factory Build	R 0.00
Decals - Stripes & reg lettering - your spec valued @ R 2000.00	X	included in Factory Build	R 0.00
Medium Wheels Standard for factory build	X	included in Factory Build	R 0.00
Full Width Instrument Panel standard for Factory build	X	included in Factory Build	R 0.00
Instrument Panel Face Plate Black Carbon	X	included in Factory Build	R 0.00
All Standard Instruments fitted free of Charge	X	included in Factory Build	R 0.00
Keyed Master Switch	X	included in Factory Build	R 0.00
Headphone Jacks fitted	X	included in Factory Build	R 0.00
Push to Talk fitted	X	included in Factory Build	R 0.00
Door Locks	X	included in Factory Build	R 0.00
Cigarette Lighter Adaptor	X	included in Factory Build	R 0.00
Full Insurance while being built	X	included in Factory Build	R 0.00
Log book and flight folio for factory builds only	X	included in Factory Build	R 0.00
All Flight tests done one hour only - extra time flown - Avgas not included	X	included in Factory Build	R 0.00
Registration with SA CCA. R 470.00	X	included in Factory Build	R 0.00
Certificate of release to service from Shadow Lite	X	included in Factory Build	R 0.00
Authority to Fly (SA CAA) R 100.00	X	included in Factory Build	R 0.00
TOTAL AIRFRAME AND ENGINE			R 533,187.33
FREIGHTING, INSURANCE & CUSTOMS CLEARING			
If Kit is sent single (one off)		R 20,000.00	
If Kit is sent in a container carrying four kits	x	R 15,000.00	R 15,000.00
The above charges are reliant on exchange controls and can change with the fluctuating exchange rates. As you can see when placing your order if we have a group booking of four the freighting costs work out much cheaper.			
TOTAL FREIGHTING & INSURANCE COSTS			R 15,000.00
OPTIONS & EXTRAS (prices are subject to change)	Foreign	R	R
If there are any other items not listed please contact factory for quote			
Extras some for kit builders or 2 seaters only			
Wheel Spats (Medium Wheels only)		AUD 400.00 R 2,666.67	
Full Width VLA Panel (alternate / Swap Price) Kit Builders Only		R 1,200.00	
Instrument face plate Black Carbon Kit Builders Only		R 800.00	
Wet Wings (fuel Tank in Wings optional extra swap out price) 2 Seater Only		AUD 3,500.00 R 23,333.33	
BigFoot (600x600 Mains: 500x6 Nose) (No Spats Available) 2 Seater kit only		AUD 500.00 R 3,333.33	
Snapvent airvents (extra vent for window plastic round) standard in factory built	x	R 110.95	R 110.95
Transponders & Radios and GPS			
Credit towards radio of choice for factory builds	x	R -4,000.00	R -4,000.00
Garmin / Apollo - www.garmin.com			
Radio - Garmin/Apollo SL40 Radio		USD 1,636.40 R 15,873.08	
Radio - Garmin/Apollo SL30 Nav/Com (Radio) with Glideslope (note will need to add CI 121 Antenna to Gamin SL30 Radio)		USD 3,602.00 R 34,939.40	
Radio & GPS - Garmin GNS 430 GPS/NAV/COM (GPS & Radio)	x	POA R 44,809.00	R 44,809.00
VOR & ILS - Garmin GI 106 A VOR/Glideslope IND	x	USD 1,663.20 R 16,133.04	R 16,133.04
Intercom - Garmin GMA 340 Audio Panel		USD 1,518.00 R 14,724.60	
Transponda - Garmin GTX 327, Antenna & AK 350 Encoder (digital)		USD 2,112.00 R 20,486.40	
Transponda - Garmin GTX 320, Antenna & AK 350 Encoder (analog)		USD 1,870.00 R 18,139.00	
GPS - Garmin GPS 296 Colour moving map		USD 1,479.60 R 14,352.12	
GPS - Garmin GPS 496 Colour moving map		USD 1,879.60 R 18,232.12	
Data cable - Garmin GPS 296 (need for panel mount)		R 300.00	
Mounting Bracket - Airgizmo - Garmin GPS 296 panel mount bracket		R 1,200.00	
Radio Antenna for second radio & for SL30 - CI 121		USD 151.20 R 1,466.64	
Bendix King - www.bendixking.com			
Radio - Bendix King 97A Radio (5 - 7 watts)		R 8,471.65	

Radio - Bendix King KT 76A Antenna & Encoder (Analog)		R	11,286.00	
Transponder - Bendix KT King 76C Antenna & Encoder (Digital)		R	14,280.00	
GPS - Bendix King GPS Skymap 111C (big screen colour)		R	17,335.00	
Other makes				
Fulsar 57 Radio (1 watt) Round face		R	7,010.52	
Fulsar 600 Radio (6 watt) round face		R	12,269.29	
Icom IC-A200 VHF Radio Package - excluding harness		R	5,800.00	
Microair Radio - M760		AUD 2,000.00	R 13,333.33	
Transpanda Microair T2000 with encoder and Antenna		AUD 2,895.25	R 19,301.67	
Flightcom Classic headsets DX5 each		USD 204.75	R 1,986.08	
Flightcom 4 place intercom 403MC (J'series will need for back passengers)		USD 241.50	R 2,342.55	
Flightcom 4 place stereo 403S		USD 260.00	R 2,522.00	
IFR Instruments and Other instruments				
IFR Instruments and Other instruments - All Non certified - 3/8 inch in size				
ASI - non certified - standard supply with all kits		USD 178.50	R 1,731.45	
VSI - non certified - standard supply with all kits		USD 157.00	R 1,522.90	
Altimeter - non certified - standard supply with all kits		USD 262.50	R 2,546.25	
Vacuum Directional Indicator (No back lighting - non certified)		USD 600.00	R 5,820.00	
Vacuum Artificial Horizon (No back lighting - non certified)	x	USD 600.00	R 5,820.00	R 5,820.00
Vacuum Pump, Vacuum Gauge, Filter	x		R 4,650.00	R 4,650.00
Electric Turn Coordinator (No back lighting - non certified)		USD 450.00	R 4,365.00	
Electric Directional Indicator (No back lighting - non certified)		USD 1,320.00	R 12,804.00	
Electric Artificial Horizon (No back lighting - non certified)		USD 1,320.00	R 12,804.00	
IFR Instruments and Other instruments - 3/8 inch in size				
ASI - certified		USD 500.00	R 4,850.00	
VSI - certified		USD 500.00	R 4,850.00	
Altimeter - certified		USD 892.25	R 8,654.83	
Vacuum Directional Indicator (No back lighting - certified)		USD 913.75	R 8,863.38	
Vacuum Artificial Horizon (No back lighting - certified)		USD 913.75	R 8,863.38	
Vacuum Pump, Vacuum Gauge, Filter			R 4,650.00	
Electric Turn Coordinator (No back lighting - certified)	x	USD 709.50	R 6,882.15	R 6,882.15
Electric Directional Indicator (No back lighting - certified)		USD 2,257.50	R 21,897.75	
Electric Artificial Horizon (No back lighting - certified)		USD 2,257.50	R 21,897.75	
Credit towards Standard non certified ASI, VSI, Alti if taking Certified inst		USD (560.00)	R -5,432.00	
Glass cockpits and web sites - please visit webs to see full functions and set ups				
www.dynonavionics.com www.grtavionics.com www.bluemountainavionics.com				
Prices are estimated - will vary to probes and set up requests see web sites US \$				
EFIS Systems can replace ASI, Alti, VSI, AH,DI, ETC, Compass, some support GPS & VOR & ILS				
There are also Engine monitoring systems available to complement glass cockpit set up				
Dynon EFIS D10A	screen 1039 x 861 mm	USD 2,758.00	R 26,752.60	
NEW Dynon EFIS D100	screen 1770 x 1244mm	USD 2,250.00	R 21,825.00	
NEW Dynon EMS D120 (engine monitoring) -	screen 1770 x 1244 mm	USD 2,000.00	R 19,400.00	
Dynon EMS D180 Flight and Engine in one unit - screen 1770 x 1244 mm		x USD 3,200.00	R 31,040.00	R 31,040.00
OAT Probe (outside air temp)		x USD 65.00	R 630.50	R 630.50
AOA Pitot probe		x USD 200.00	R 1,940.00	R 1,940.00
Battery - for back up if electric failure		x USD 130.00	R 1,261.00	R 1,261.00
Remote Compass		x USD 100.00	R 970.00	R 970.00
Wiring harness		x USD 90.00	R 873.00	R 873.00
Engine monitoring probes J33 (jabiru 3300 engine)		x USD 570.00	R 5,529.00	R 5,529.00
Fuel Flow Probe		USD 200.00	R 1,940.00	
Princeton Electronic NPT Set of Fuel Probes		USD 528.45	R 5,125.97	
Freighting from Dynon		USD 200.00	R 1,940.00	
Credit standard supply engine instruments (EGT, CHT oil temp, oil press)			R -1,670.00	
Credit this towards Dynon engine instruments				
Dynon now supports VOR if SL30 radio is fitted				
Blue Mountain EFIS Lite - Long lead time	screen 1048 x 1048mm	USD 3,495.00	R 33,901.50	
Grand Rapids EFIS Horizon series1	screen 1588 x 1207mm	USD 8,450.00	R 81,965.00	
Auto Pilot see web sites - please visit web sites for full functions and set ups				
www.trutrakflightsystems.com www.bluemountainavionics.com				
Prices - will need to add freighting to SA - extra US\$ 200.00 US \$				
Trutrak Digiflite II VS G Autopilot system (web) 2 axis		USD 4,925.00	R 47,772.50	
Fitment and making up of cables -			R 3,450.00	
Digitrack wing leveller Auto pilot - 3-1/8"		USD 1,745.00	R 16,926.50	
Digitrack wing leveller Auto pilot - with GPS steering 3-1/8"	x	USD 2,120.00	R 20,564.00	R 20,564.00
Fitment and making up of cables	x		R 2,450.00	R 2,450.00
Pictoral Pilot - 3 1/8"		USD 2,145.00	R 20,806.50	
Fitment and making up of cables			R 2,450.00	
Freighting from America to SA estimated	x	USD 200.00	R 1,940.00	R 1,940.00
Other options and other extras				
Emergency Locator Transmitter (fixed)	x	USD 357.00	R 3,462.90	R 3,462.90

FS 450 Fuel Flow monitor (excellent - worth putting in)	x	USD 640.50	R 6,212.85	R 6,212.85
Pilot Grip stick upgrade - for elec flap, ptt etc control selector on stick	x	USD 205.00	R 1,988.50	R 1,988.50
Aviation clock	x	USD 225.75	R 2,189.78	R 2,189.78
CI 121 External Antenna Com Antenna		USD 151.20	R 1,466.64	
CI 105 Transponder Antenna		USD 118.80	R 1,152.36	
Outside air temp - fitted inside - small round instrument fitted in wing	x		R 130.00	R 130.00
Painting and decals & Reg Decals and interiors				
Extra painting eg underbelly another colour		POA - average	R 2,000.00	
Metalic Decals, or special vinyl colours or airbrushed vinyl		average	R 1,800.00	
Fancy leather J400 / J450 Seats & pockets - swop out price			R 3,486.00	
J400/ J450 Leather Seats & pocketsOptional Extra - swop out price			R 2,986.49	
SP/UL Leather Seats Optional Extra - swop out price			R 1,586.49	
Alternate Propellers				
Web Site: www.sensenichprop.com		US \$		
Sensenich nickel edge composite two bladed ground ajustable propeller	x	USD 1,725.00	R 16,732.50	R 16,732.50
Credit on Jabiru 3300 Propeller	x		R -5,500.00	R -5,500.00
Web Site: www.propellor.com		NZ\$ New Zealand		
Airmaster constant speed - inflight ajustable three bladed propeller		NZD 8,900.00	R 46,670.16	
Lighting - all manufactured in house not imported				
Landing Light - deduct if going for dual landing lights			R -120.00	
Dual Landing light fitted into Cowling	x		R 1,360.00	R 1,360.00
Back Lighting to light up instrument panel (local made)	x		R 650.00	R 650.00
Anti Collition light on back of aircraft for night flying	x		R 500.00	R 500.00
Extra charges for extras in fitment and wiring				
Wiring and connections for vacuum instruments & extras	x		R 1,500.00	R 1,500.00
Fitment & Calibration of instruments and EFIS units	x		R 1,500.00	R 1,500.00
Supplied instruments will be quoted for installation		POA	R -	
Other instruments have an extra wiring charge @ R 230.00 per hour		POA	R -	
Special Aircraft registration - with stay with aircraft - can not be kept by owner if sell aircraft later				
Reserve special registration with CAA (eg ZU-JAB or ZU-LES)			R 2,000.00	
TOTAL OPTIONAL EXTRAS ORDERED				R 172,329.17
GRAND TOTAL				R 720,516.50
ALL ABOVE PRICES EXCLUDE VAT @ 14 %				
			Sub Total	R 720,516.50
			14% VAT - N/A	
			Nett Total	R 720,516.50

PAYMENT TERMS	BANKING DETAILS
<ul style="list-style-type: none"> - A non refundable deposit of R 30,000.00 for your kit to be placed on order - Payment for your kit two weeks before shipping from Australia Kit Price = same as Kit aircraft price exluding vat Less Deposit paid - Freight, insurance, clearing & Vat payable on delivery to the Factory - Half the building costs are payable before commencement of the build - Extras such as instruments are payable on placing your order - Final Payment of the build must be paid before collection or on collection. <p>Please note:-it is this Companies policy that we will only accept Bank cleared and certified Cheques.</p> <p>Preferable - internet payment. Note cheque = 10 days clearing</p> <p>Payment in cash will have a bank handling fee added.</p>	<p>Pay: Shadow Lite C.C.</p> <p>Bank: Nedbank</p> <p>Branch: Pinetown</p> <p>Branch code: 133 926</p> <p>Account No: 1339 377691</p> <p>Please Fax Proof Of Payment</p>
WHAT IS NOT SUPPLIED WITH THE JABIRU Kit:- (for Kit Builders Only)	
<p>Body filler - (3-4 kgs required) and sanding materials, you can use automotive body fillers or we can supply you with an ultralight weight filler called Microballoons (price on request)</p> <p>Paints - (exterior) we use an automotive twin pack paint. We have been using this paint for over ten years on aircraft and are very satisfied with it's durability.</p> <p>Upholstery for the interior & seat covers. - The Factory use carpeting/Material trimmed with Vinyl, on the floors and up the sides. You must keep your upholstery as light weight as possible, the factory can give samples or we could make up a set of carpets which you can glue in. As for seat covers we use fabric seat covers but most customers opt to go for leather - You will be able to purchase upholstery kits made up One note to consider is that there is some painting required in the interior before fitting of parts. This paint is not provided and is a normal household enamel paint you need to decide quite early build on color for interior enamel paint so you will need to decide quite early in your build what colour you will be doing the interior</p> <p>Stripes and registration letters - we can supply them or they can be made up at any company offering automotive stripes, or you could painted them on.</p> <p>Registration with CCA. and Registration Lettering to your spec - factory will assist with forms</p> <p>Radio Station License - (for radio fitted into aircraft - ICASA)</p> <p>Certificate of release to service from Shadow Lite</p> <p>Authority to Fly (CAA) Ready to Fly</p> <p>Please also note that homebuilds cannot be registered for commercial use.</p> <p>If you require any further information or extras please fax through your requirements.</p> <p>Due to today's unstable economic climate and the fluctuating exchange rates we are quoting in Australian Dollars and were possible we have quoted in Rands. Price of the Kit and Engines will be the rate at time of payments to Australia</p> <p><i>NOTE: Orders for factory builds that are changed to homebuilds after dispatch from Australia will be charged for all extras that have been included specifically for factory build kits</i></p>	

**PRICE LIST
NOVEMBER 2008**

			Duty & VAT Free	Duty & VAT Paid
NISSAN				
NISSAN JAPAN			JPY	JPY
Patrol Standard 4,200 cc diesel	YR-809	10 seat / 5 door / 5MT	3,920,000	6,170,000
Patrol GL 4,200 cc diesel	YR-811	7 seat / 5 door / 5MT / side steps / overfenders	4,550,000	7,160,000
Patrol SGL 4,200 cc diesel	YR-812	7 seat / 5 door / 5MT	5,010,000	7,900,000
Patrol GRX 4,200 cc diesel (SGL badged)	YR-813AC	7 seat / 5 door / 5MT	5,690,000	8,980,000
Patrol GRX 4,800 cc petrol Auto	YR-815C	7 seat / 5 door / 5AT	6,320,000	9,970,000
Patrol Pick Up 4,200 cc diesel	TNZ-U61-001	Single cab 4x4 / 5MT	3,480,000	5,070,000
Urvan 15 seat minibus 3,000 cc diesel	ER-702	15 seat	3,440,000	5,000,000
X-Trail New 2.5l SLX Petrol	TR-709	5 seat / 4x4 / CVT / Leather	3,690,000	5,810,000
X-Trail Classic 2l Petrol	TR-800	5 seat / 4x4 / 5MT	2,700,000	4,090,000
BUSES				
Civilian Bus 26 seat DX	DX	26 seat from	5,070,000	7,370,000
Civilian Bus 30 seat DX	DX	30 seat from	5,320,000	7,750,000
Civilian Bus 26 seat SX	SX	26 seat from	5,950,000	8,660,000
Civilian Bus 30 seat SX	SX	30 seat from	6,210,000	9,040,000
NISSAN SOUTH AFRICA			US\$	US\$
Hardbody K11 (J40)	2.5TD basic	D/C, 4x2, AC, RT, ABS, airbags	22,500	28,100
Hardbody J 56 (J46)	2.7D basic	S/C, 4x2, RT	19,600	24,600
Hardbody J 82 (J81)	3.2D basic	S/C, 4x4, AC, RT	22,370	27,990
Hardbody J 83 (J84)	3.2D basic	D/C, 4x4, AC, RT	24,680	31,000
Hardbody J 86 (J85)	3.0TD luxury	D/C, 4x4, AC, CD, ABS, airbags	29,240	36,740
Cabstar 20	3.2D, 2mt	Light Truck	22,100	27,400
NISSAN EUROPE			EUR	EUR
Pathfinder 2.5l LE High Spec 5 A/T	R51C-810	7 seat / leather / 6 air bags	37,500	59,500
Qashqai 1.6l 4x2 Visia 5 M/T	QR-101	cloth / manual A/C	16,890	25,410
Qashqai 2.0l 4x4 Tekna 6 CVT	QR-117	leather / alloy / dual Auto A/C	21,090	31,810
NISSAN THAILAND			US\$	US\$
Navara 2.5l LE High Spec Auto	DR-145	leather, 6 CD, 16" alloys, side step	35,400	51,500
Navara 2.5l SE Std Manual	DR-141	fabric, CD	29,860	43,390
SUZUKI				
			JPY	JPY
Grand Vitara Classic Auto	SQ420W	mag rims	2,620,000	3,890,000
Grand Vitara SQ420W High Spec Auto	JLX-AL	leather, 6cd, mag rims	2,900,000	4,320,000
Grand Vitara 2.4l Classic 5 M/T	JLX	mag rims	2,580,000	3,840,000
Grand Vitara 2.4l Classic 4 A/T	JLX	mag rims	2,730,000	4,080,000
Grand Vitara 2.4l High Spec 4A/T	JLX-EL	leather, 6cd, mag rims	3,060,000	4,580,000
Jimny	SN413-JLX		1,580,000	2,280,000
MARUTI				
			US\$	US\$
Omni 8-seater	0.8P	8 seat, no A/C	6,070	8,570
Omni Cargo	0.8P	cargo, no A/C	5,900	8,300
Gypsy King - Hard top	1.3P	no AC	9,990	14,990
Gypsy King - Soft top	1.3P	no AC	9,260	13,900
JEEP				
			US\$	US\$
Grand Cherokee Overland	3.0CRD	5 seat/4x4/5AT/leather/wood finish	51,500	81,500
Commander	3.0TD	7 seat/4x4/5AT/leather from	48,300	75,450
MERCEDES-BENZ				
			EUR	EUR
C200K ELEGANCE/AVANTGARDE		from	42,550	60,500
E200K		from	43,560	63,540
ML320CDI		from	56,450	92,200
GL320CDI		from	66,000	105,000
S350 SHORT WHEEL BASE		from	73,750	116,000
SPRINTER BUS 15 SEATS DUAL A/C	MB311-CDI		32,790	47,730
SPRINTER BUS 15 SEATS CENTRAL A/C	MB311-CDI		31,430	45,740



DT DOBIE TANZANIA



DT DOBIE TANZANIA

Specifications for the NISSAN PATROL Y61 Station Wagon

Magnificent. Well-integrated exterior. Comfortable interior. Powerful performance.

	STD	GL	SGL	SGL (badged)	GRX
4.2 Diesel, 99 kW Power, 280 Nm Torque	Yes	Yes	Yes	Yes	X
4.8 Petrol, 206 kW Power, 451 Nm Torque	X	X	X	X	Yes
Seating configuration	10	7	7	7	7
Power steering	Yes	Yes	Yes	Yes	Yes
Gear lock	Yes	Yes	Yes	Yes	X
Air conditioner	Yes	Yes	Yes	Yes	Yes
Rear air conditioner	X	X	Yes	Yes	Yes
Sub fuel tank with dual fuel meter (135 litres total capacity)	Yes	Yes	Yes	Yes	Yes
Limited Slip Differential (LSD) / Diff Lock (DL)	X	LSD	LSD	DL	DL
Free wheeling front hubs Manual (MA) / Automatic (AT)	MA	AT	AT	AT	AT
Radio Cassette (RC) / CD player	RC	RC	CD	X	X
Radio Cassette plus CD autochanger	X	X	X	Yes	Yes
Central locking, Power windows, Power mirrors	X	Yes	Yes	Yes	Yes
Keyless entry with integrated key	X	X	Yes	Yes	Yes
Front and rear mudguards	Yes	Yes	Yes	Yes	Yes
Side steps	X	Yes	Yes	Yes	Yes
Cargo net and fog lamps	X	X	Yes	Yes	Yes
Halogen head lamp (2-Reflector)	Yes	Yes	Yes	Yes	Yes
Tyre size & wheel & spare tyre	16" Steel	16" Steel	16" Steel	17" Alloy	17" Alloy
Hard spare tyre cover	X	X	X	Yes	Yes
Cruise control	X	X	X	Yes	Yes
Front and rear disc brakes	X	Yes	Yes	Yes	Yes
Sun roof	X	X	X	Yes	Yes
Luxury pack with Alcantara trim (A) or Leather trim (L)	X	X	A	L	L
Wood steering wheels with controls	X	X	X	Yes	Yes
Anti-Lock Braking System	X	Yes	Yes	Yes	Yes
Air bags (D-driver, F-Driver + Passenger, S-Driver + Passenger + Side)	D	F	F	S	S
Power front seats	X	X	X	Yes	Yes
Seat back tables	X	X	Yes	Yes	Yes





DT DOBIE TANZANIA

Specifications for the new NISSAN HARDBODY

Challenges. Tough terrains. Tough jobs !

	SINGLE CABIN		DOUBLE CABIN			
	4x2	4x4	4x2		4x4	
	STD J56	STD J82	STD K11	LUXURY J55	STD J83	LUXURY J86
2.7 Diesel, 64 kW Power, 178 Nm Torque	Yes	X	X	X	X	X
3.0 Turbo Diesel, 105 kW Power, 314 Nm Torque	X	X	X	Yes	X	Yes
3.2 Diesel, 76 kW Power, 216 Nm Torque	X	Yes	X	X	Yes	X
2.5 Turbo Diesel, 98 kW Power, 304 Nm Torque	X	X	Yes	X	X	X
Differential lock	Yes	Yes	Yes	Yes	Yes	Yes
Power steering	Yes	Yes	Yes	Yes	Yes	Yes
Gear lock	Yes	Yes	Yes	Yes	Yes	Yes
Immobiliser	X	X	X	Yes	X	Yes
Radio Cassette (RC) / CD player	RC	RC	RC	CD	RC	CD
Air conditioner	X	Yes	Yes	Yes	Yes	Yes
Central locking, keyless entry	X	X	X	Yes	X	Yes
Power windows	X	X	X	Yes	X	Yes
Tonneau cover	X	X	X	Yes	X	Yes
Side steps	X	X	X	Yes	X	Yes
Alloy wheels	X	X	X	Yes	X	Yes
Anti-Lock Braking System	X	X	Yes	X	X	Yes
Side impact protection bars	Yes	Yes	Yes	Yes	Yes	Yes
Digital clock	Yes	Yes	Yes	Yes	Yes	Yes
Rev counter	Yes	Yes	Yes	Yes	Yes	Yes
Driving + Passenger airbags	X	X	Yes	Yes	X	Yes
Leather steering wheel	X	X	X	Yes	X	Yes
Front seat type	Bench	Bucket	Bucket	Bucket	Bucket	Bucket
Remote control door windows	X	X	X	Yes	X	Yes
Styled rear bumper with provision for towball	X	X	X	Yes	X	Yes
Front fog lamps	X	X	X	Yes	X	Yes
Roof carrier	X	X	X	Yes	X	Yes
Head rests	Yes	Yes	Yes	Yes	Yes	Yes
Driver's foot rest	Yes	Yes	Yes	Yes	Yes	Yes





DT DOBIE TANZANIA

DTD/SAL/2149
11th November, 2008

REVISED PROFORMA INVOICE

MAKONDE CEMENT LIMITED
P.O. BOX 2318
Dar es Salaam

FAO: Neil Garden – Consultant / Director

THREE UNITS: NISSAN PICKUP HARDBODY SINGLE CABIN 4WD
MODEL: STD (LW B) J82
ENGINE: 3200cc DIESEL
TYRES: 215R15

Specification: Full technical specification is attached for your perusal. Should you have additional questions or seek further clarification, please do not hesitate to contact us.

Unit price	US\$ 22,370.-
Discount (3%)	US\$ 671.-
	<u>US\$ 21,699.-</u>
Three units	US\$ 65,097.-

Vehicle Duty Free and VAT Free, **on the road Dar es Salaam**, with the exception of insurance.

Delivery: Approximately mid of December 2008 (without obligation) from confirmation of order (receipt of payment – deposit = 30%) and receipt of all necessary documents. Subject to stock availability.

Validity: Please note that the quote is valid for 30 days, until 11.12. 2008. We reserve the right to adjust the above quoted price should there be any change in Government Policy regarding taxes on vehicles and/or should there be any manufacturers' price increases on vehicles, subsequent to the date of our quote, but before delivery of the vehicle.

Mode of payment: Direct payment to M/s.D.T.Dobie & Co. (T) Ltd.,
STANBIC BANK
US \$ Account No. 024 00102093 02

N.B.: Invoices will be raised in Tshs. at the rate/s on the date/s of payment. Payment in any other currency shall be determined at the Stanbic Bank selling rate on the day of the payment.

Wayne McIntosh

Stephanie Paque

WAYNE MCINTOSH
COMMERCIAL MANAGER

STEPHANIE PAQUE
COMMERCIAL SUPERVISOR

WARNING: HIDDEN COSTS CAN DAMAGE YOUR WEALTH: Many suppliers quote a CIF price and make additional charges for local costs. Our quote is inclusive of all charges except insurance.

CFAO DT DOBIE TANZANIA
P. O. Box: 40798 Dar Es Salaam, Tanzania
Tel: +255 22 2861040, Fax: +255 22 2865129
E-mail: info@dtd-cfao.co.tz



DT DOBIE TANZANIA

DTD/SAL/2150
11th November, 2008

PROFORMA INVOICE

MAKONDE CEMENT LIMITED
P.O. BOX 23418
Dar es Salaam

FAO: Neil Garden – Consultant / Director

ONE UNIT: NISSAN PICKUP HARDBODY DOUBLE CABIN 4WD
MODEL: J83 (basic version)
ENGINE: 3200cc DIESEL
TYRES: 215R15

Specification: Full technical specification is attached for your perusal. Should you have additional questions or seek further clarification, please do not hesitate to contact us.

Unit price	US\$ 24,680.-
Discount (3%)	US\$ 740.-
	US\$ 23,940.-

Vehicle Duty Free and VAT Free, **on the road Dar es Salaam**, with the exception of insurance.

Delivery: Approximately 20 working days (without obligation) from confirmation of order (receipt of payment – deposit = 30%) and receipt of all necessary documents. Subject to stock availability.

Validity: Please note that the quote is valid for 30 days, until 11.12. 2008. We reserve the right to adjust the above quoted price should there be any change in Government Policy regarding taxes on vehicles and/or should there be any manufacturers' price increases on vehicles, subsequent to the date of our quote, but before delivery of the vehicle.

Mode of payment: Direct payment to M/s.D.T.Dobie & Co. (T) Ltd.,
STANBIC BANK
US \$ Account No. 024 00102093 02

N.B. Invoices will be raised in Tshs. at the rate/s on the date/s of payment. Payment in any other currency shall be determined at the Stanbic Bank selling rate on the day of the payment.

Wayne McIntosh

Stephanie Paque

WAYNE MCINTOSH
COMMERCIAL MANAGER

STEPHANIE PAQUE
COMMERCIAL SUPERVISOR

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DT DOBIE TANZANIA

DTD/SAL/2151
11th November, 2008

PROFORMA INVOICE

MAKONDE CEMENT LIMITED
P.O. BOX 23418
Dar es Salaam

FAO: Neil Garden – Consultant / Director

ONE UNIT: NISSAN PICKUP HARDBODY DOUBLE CABIN 4WD
MODEL: J86 (luxury version)
ENGINE: 3000 TURBO DIESEL
TYRES: 245/70R16

Specification: Full technical specification is attached for your perusal. Should you have additional questions or seek further clarification, please do not hesitate to contact us.

Unit price	US\$ 29,240.-
Discount (3%)	US\$ 877.-
	US\$ 28,363.-

Vehicle Duty and VAT Free, on the road Dar Es Salaam, with the exception of insurance if applicable.

Delivery: Approximately beginning of January 2009 (without obligation) from confirmation of order (receipt of payment – deposit = 30%) and receipt of all necessary documents. Subject to stock availability.

Validity: Please note that the quote is valid for 30 days, until 11.12. 2008. We reserve the right to adjust the above quoted price should there be any change in Government Policy regarding taxes on vehicles and/or should there be any manufacturers' price increases on vehicles, subsequent to the date of our quote, but before delivery of the vehicle.

Mode of payment: Direct payment to M/s.D.T.Dobie & Co. (T) Ltd.,
STANBIC BANK
US \$ Account No. 024 00102093 02

N.B. Invoices will be raised in Tshs. at the rate/s on the date/s of payment. Payment in any other currency shall be determined at the Stanbic Bank selling rate on the day of the payment.

Wayne McIntosh

WAYNE MCINTOSH
COMMERCIAL MANAGER

Stephanie Paque

STEPHANIE PAQUE
COMMERCIAL SUPERVISOR

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DT DOBIE TANZANIA

DTD/SAL/2153
25th June, 2008

PROFORMA INVOICE

MAKONDE CEMENT LIMITED
P.O. BOX 23418
Dar es Salaam

FAO: Neil Garden – Consultant / Director

ONE UNIT: **NISSAN PATROL STATION WAGON 4WD**
MODEL: GRX
ENGINE: 4800 CC PETROL
TRANSMISSION: 5-SPEED AUTOMATIC

Specifications: Full technical specification is attached for your perusal. Should you have additional questions or seek further clarification, please do not hesitate to contact us.

Selling price:	JPY 6,320,000.-
Less discount	JPY 189,600.-
	=====
	JPY 6,130,400.-

Price: Vehicle Duty and VAT free, **on the road Dar Es Salaam**, with the exception of insurance if applicable. Equivalent to US\$ 64,558 as per today's exchange rate and subject to change.

Delivery: Approximately 20 working days (without obligation) from confirmation of order (receipt of payment – deposit = 30%) and receipt of all necessary documents. Subject to stock availability.

Validity: Please note that the quote is valid for 30 days, until 11.12. 2008. We reserve the right to adjust the above quoted price should there be any change in Government Policy regarding taxes on vehicles and/or should there be any manufacturers' price increases on vehicles, subsequent to the date of our quote, but before delivery of the vehicle.

Mode of payment: Direct payment to M/s.D.T.Dobie & Co. (T) Ltd.,
STANBIC BANK
US \$ Account No. 024 00102093 02

N.B. Invoices will be raised in Tshs. at the rate/s on the date/s of payment. Payment in any other currency shall be determined at the Stanbic Bank selling rate on the day of the payment.

Wayne McIntosh

Stephanie Paque

WAYNE MCINTOSH
COMMERCIAL MANAGER

STEPHANIE PAQUE
COMMERCIAL SUPERVISOR

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DT DOBIE TANZANIA

DTD/SAL/2152
25th June, 2008

PROFORMA INVOICE

MAKONDE CEMENT LIMITED
P.O. BOX 23418
Dar es Salaam

FAO: Neil Garden – Consultant / Director

ONE UNIT: NISSAN PATROL STATION WAGON 4WD
MODEL: GRX (SGL BADGED)
ENGINE: 4200 CC DIESEL
TRANSMISSION: 5-SPEED MANUAL

Specifications: Full technical specification is attached for your perusal. Should you have additional questions or seek further clarification, please do not hesitate to contact us.

Selling price:	JPY 5,690,000.-
Less discount	JPY 170,700.-
	=====
	JPY 5,519,300.-

Price: Vehicle Duty and VAT free, on the road Dar Es Salaam, with the exception of insurance if applicable. Equivalent to US\$ 58,122 as per today's exchange rate and subject to change.

Delivery: Approximately mid of December 2008 (without obligation) from confirmation of order (receipt of payment – deposit = 30%) and receipt of all necessary documents. Subject to stock availability.

Validity: Please note that the quote is valid for 30 days, until 11.12. 2008. We reserve the right to adjust the above quoted price should there be any change in Government Policy regarding taxes on vehicles and/or should there be any manufacturers' price increases on vehicles, subsequent to the date of our quote, but before delivery of the vehicle.

Mode of payment: Direct payment to M/s.D.T.Dobie & Co. (T) Ltd.,
STANBIC BANK
US \$ Account No. 024 00102093 02

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DT DOBIE TANZANIA

DTD/SAL/2152
25th June, 2008

PROFORMA INVOICE

MAKONDE CEMENT LIMITED
P.O. BOX 23418
Dar es Salaam

FAO: Neil Garden – Consultant / Director

ONE UNIT: NISSAN PATROL STATION WAGON 4WD
MODEL: GRX (SGL BADGED)
ENGINE: 4200 CC DIESEL
TRANSMISSION: 5-SPEED MANUAL

Specifications: Full technical specification is attached for your perusal. Should you have additional questions or seek further clarification, please do not hesitate to contact us.

Selling price:	JPY 5,690,000.-
Less discount	JPY 170,700.-
	=====
	JPY 5,519,300.-

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STANBIC BANK
US \$ Account No. 024 00102093 02

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E-mail: info@dtd-cfao.co.tz



TOYOTA TANZANIA LTD

No. 5 Nyerere Road
P.O. Box 9060, Dar es Salaam, Tanzania
Tel.: (255) 22-2866815-8, 2866353-8
Fax: (255) 22-2866814, 2861293
Web: www.toyotatz.com

Terms & Conditions of Sale

Beneficiary: Toyota Tanzania Ltd (TTL)

Subject: invoice is subject to Dar es Salaam jurisdiction

Bankers: **For US Dollar deposit:**
NBC Ltd,
Samora Avenue Branch, Dar es Salaam Tanzania
US Dollar A/C No: 012105021237
Swift Code: - NLCB TZ T XXXXX
OR
For TZ Shilling deposit:
NBC Ltd,
City Corporate Branch, Dar es Salaam Tanzania
Tz. Shs. A/C No. 011103005134
Swift Code: - NLCB TZT XA 0T8

Customer to use correct account for the currency of the payment.

Payment: Full remittance in advance has to be made to our Bankers using the bank details aforesaid. Payment must be made for the full amount (net) in USD or TSH equivalent to Japanese Yen selling price of the vehicle (or USD for vehicles Ex-South Africa). Payment **MUST** cover the bank charges for remittance of funds (all transfer charges are for the account of the Customer). Our Proforma Invoice Number must be quoted when making the payment and we advise you to inform us when payment has been made. Letter of credit is not acceptable. Exchange rate will be the effective rate calculated by TTL (based on NBC rate) applicable on the date of credit to our account.

Interest at the rate of 24% p.a. will be charged for payments made after due date.

Delivery: Upon receipt of full payment towards selling price, all taxes and VAT and Local Charges. Allocation is subject to supply of stock by our principals, Toyota, and availability of the same. Availability of stock and vehicle allocation on the proforma invoice is subject to changes in case of delayed shipment of units. By supplier

Reservation of vehicles: In order to reserve a vehicle, a deposit of minimum 50% of the Selling Price must be made to Toyota Tanzania Ltd. In the event that the balance payment is not made before arrival of the vehicle Toyota Tanzania Ltd reserve the right to reallocate the vehicle to other customer and in case vehicle is left unsold after arrival Toyota Tanzania Ltd reserves the right to forfeit the whole or part of the deposit to offset costs incurred in holding the vehicle unsold or recovering any loss from such sale.

Local Charges: A separate local charges tax invoice will be issued covering local costs such as Handling, Wharfage, Port and Bond clearance, registration and number plates. Local charges for vehicles whose delivery is not in Dar es Salaam will vary.

Branches: Dar es Salaam: P.O. Box 9060, Dar es Salaam, Tel.: 2118990-4, Fax: (255) 2112987/2118994, Tanga: Bombo Hospital Rd. P.O. Box 109, Tanga, Tel.: 027 2644668/46473, Fax: 027 2644669, Arusha: Goliendo Rd, P.O. Box 194, Arusha, Tel.: 027 2508427, Fax: 027 2548426,
E-mail: sales@toyotatz.com • mkting@toyotatz.com • services@toyotatz.com • parts@toyotatz.com
Directors: Hatim A. Karimjee (Chairman) • Mahmood A. Karimjee (Managing Director) • Nazim A. Karimjee



- Taxes: Deposits to cover Import Duty, Excise Tax and Value Added Tax, where applicable, are payable to us and we shall duly pay to Commissioner of Customs. Our new vehicle Tax Invoice will show the amount of duty and Vat paid. VAT will be based on the selling price of the vehicle as per VAT law. Supplementary invoice along with applicable Taxes will be issued to the customer and be payable based on the exchange rate prevailing on the date of payment if payment is made after invoice date.
- Clearing & Forwarding: Clearance will be undertaken by our Clearing & Forwarding Department and the clearing charges which includes agency fees will be charged to you vide our local charges Tax Invoice.
- Clearance by Customer : In case the customer is clearing the vehicles at its own and paying Custom Duty and VAT directly or through Treasury Voucher then customer has to ensure that VAT is paid on the TTL selling price and not on the TTL import CIF price. Difference if any arises due to above, customer is liable to pay the same to TTL.
- Registration: The cost of vehicle registration inclusive of Number Plates will also be charged to you vide our local Charges Tax Invoice.
- Extra Accessories: Extra accessories requested and fitted locally will be separately charged in our local charges Tax Invoice.
- Insurance: Customers are solely responsible for arranging insurance for their vehicle(s) once vehicles are registered.
- Storage: Toyota Tanzania reserves the right to charge for storage of any vehicles which :
- has been paid for and cleared out of bond but not collected by the customer.
- is paid or not paid waiting for tax exemption approval.
- is allocated/ reserved but no payment is received.
- Indemnity: The customer agrees to indemnify and hold Toyota Tanzania indemnified against any loss cost or expense suffered or incurred by Toyota Tanzania as a result of a default by the customer or a breach of the terms hereof.
- Warranty: Vehicles are covered under the standard Toyota Vehicle Warranty Scheme.
- Documents: **Important:** Original Import Duty and VAT Exemptions if applicable must be supplied to us with your confirmation of order **after getting it revalidated from Large Tax Payer department of TRA (unless issued by the same authority)** . Law prohibit delivery and invoicing before the date of revalidation of Exemption documents. Tax Identification Number Certificate is also required.

Specifications and Prices of the Vehicles are subject to change without notice



TOYOTA TANZANIA LTD

No. 5 Nyerere Road
P.O. Box 9060, Dar es Salaam, Tanzania
Tel.: (255) 22-2866815-8, 2866353-8
Fax: (255) 22-2866814, 2861293
Web: www.toyotatz.com

ISSUING BRANCH

NYERERE RD.

TIN 100-146-304

VRN 10-006645-E

13/11/2008

PROFORMA INVOICE NO. PF/CON/PR/O2/22092 R

IMPORTANT: THIS NUMBER MUST BE QUOTED
IN ALL CORRESPONDENCE AND WHEN
REMITTING PAYMENT.

MAKONDE CEMENT
P O BOX 767
MTWARA

Dear Mr. N. Garden

In response to your recent inquiry for **Toyota Landcruiser Station Wagon VX Automatic** we have pleasure in quoting for the following on behalf of the suppliers, as per terms and conditions attached.

MODEL: VDJ200R-GNTEZ

COLOUR: Subject to order confirmation

AVAILABILITY: Subject to order confirmation

EQUIPPED WITH SPECIAL TANZANIA SPECIFICATIONS:

UNIT PRICE	Yen	7,006,000
QUANTITY UNITS REQUIRED:		1
TOTAL PRICE	Yen	7,006,000
* AT CURRENT EXCHANGE RATE: EQUIVALENT TO	USD	75,610
IMPORT DUTY (N/A)	"	0
EXCISE DUTY (N/A)	"	0
VAT (N/A)	"	0
LOCAL CHARGES	"	3,143
TOTAL AMOUNT REMITTABLE	USD	78,753

*EXCHANGE RATE RULING WILL BE THE ONE APPLICABLE ON THE DAY
OUR ACCOUNT IS CREDITED WITH FUNDS.

THIS PROFORMA IN YEN IS VALID FOR 14 DAYS FROM THIS DAY, 13/11/2008
OTHER DETAILS AS PER ATTACHED TERMS AND CONDITIONS OF SALE.

REMARKS: DO NOT DEDUCT WITH-HOLDING TAX AS
PER TRA CERTIFICATE NO. 0069515

Branches: Dar es Salaam: P.O. Box 9060, Dar es Salaam, Tel.: 2118990-4, Fax: (255) 2112987/2118994, Tanga: Bombo Hospital Rd. P.O. Box 109, Tanga, Tel.: 027 2644668/46473, Fax: 027 2644669, Arusha: Goliandoi Rd, P.O. Box 194, Arusha, Tel.: 027 2508427, Fax: 027 2548426,
E-mail: sales@toyotatz.com • mkting@toyotatz.com • services@toyotatz.com • parts@toyotatz.com
Directors: Hatim A. Karimjee (Chairman) • Mahmood A. Karimjee (Managing Director) • Nazim A. Karimjee





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ISSUING BRANCH

TIN 100-146-304

13/11/2008

NYERERE RD.

VRN 10-006645-E

PROFORMA INVOICE NO. PF/CON/PR/O2/22100 R

**IMPORTANT: THIS NUMBER MUST BE QUOTED
IN ALL CORRESPONDENCE AND WHEN
REMITTING PAYMENT.**

**MAKONDE CEMENT
P O BOX 767
MTWARA**

Dear Mr. N. Garden

In response to your recent inquiry for **Toyota Hilux 4WD Single Cabin** we have pleasure in quoting for the following on behalf of the suppliers, as per terms and conditions attached.

MODEL: LAN25R-TRMDEN

COLOUR: Subject to order confirmation

AVAILABILITY: Subject to order confirmation

EQUIPPED WITH SPECIAL TANZANIA SPECIFICATIONS:

UNIT PRICE	USD	20,700
QUANTITY UNITS REQUIRED:		3
TOTAL PRICE	USD	62,100
* AT CURRENT EXCHANGE RATE: EQUIVALENT TO	USD	62,100
IMPORT DUTY (N/A)	"	0
EXCISE DUTY (N/A)	"	0
VAT (N/A)	"	0
LOCAL CHARGES	"	5,715
TOTAL AMOUNT REMITTABLE	USD	67,815

*EXCHANGE RATE RULING WILL BE THE ONE APPLICABLE ON THE DAY
OUR ACCOUNT IS CREDITED WITH FUNDS.

THIS PROFORMA IN YEN IS VALID FOR 14 DAYS FROM THIS DAY, **13/11/2008**
OTHER DETAILS AS PER ATTACHED TERMS AND CONDITIONS OF SALE.

**REMARKS: DO NOT DEDUCT WITH-HOLDING TAX AS
PER TRA CERTIFICATE NO. 0069515**

Branches: **Dar es Salaam:** P.O. Box 9060, Dar es Salaam, Tel.: 2118990-4, Fax: (255) 2112987/2118994, **Tanga:** Bombo Hospital Rd. P.O. Box 109, Tanga, Tel.: 027 2644668/46473, Fax: 027 2644669, **Arusha:** Goliondoi Rd, P.O. Box 194, Arusha, Tel.: 027 2508427, Fax: 027 2548426,

E-mail: sales@toyotatz.com • mkting@toyotatz.com • services@toyotatz.com • parts@toyotatz.com

Directors: Hatim A. Karimjee (Chairman) • Mahmood A. Karimjee (Managing Director) • Nazim A. Karimjee





TOYOTA TANZANIA LTD

No. 5 Nyerere Road
P.O. Box 9060, Dar es Salaam, Tanzania
Tel.: (255) 22-2866815-8, 2866353-8
Fax: (255) 22-2866814, 2861293
Web: www.toyotatz.com

ISSUING BRANCH

TIN 100-146-304

13/11/2008

NYERERE RD.

VRN 10-006645-E

PROFORMA INVOICE NO. PF/CON/PR/O2/22091 R

**IMPORTANT: THIS NUMBER MUST BE QUOTED
IN ALL CORRESPONDENCE AND WHEN
REMITTING PAYMENT.**

**MAKONDE CEMENT
P O BOX 767
MTWARA**

Dear Mr. N. Garden

In response to your recent inquiry for **Toyota Hilux 4WD Double Cabin** we have pleasure in quoting for the following on behalf of the suppliers, as per terms and conditions attached.

MODEL:LAN25R-PRMDEN

COLOUR: Subject to order confirmation

AVAILABILITY:SUBJECT TO ORDER CONFIRMATION

EQUIPPED WITH SPECIAL TANZANIA SPECIFICATIONS:

UNIT PRICE	USD	23,800
QUANTITY UNITS REQUIRED:		3
TOTAL PRICE	USD	71,400
* AT CURRENT EXCHANGE RATE: EQUIVALENT TO	USD	71,400
IMPORT DUTY (N/A)	"	0
EXCISE DUTY (N/A)	"	0
VAT (N/A)	"	0
LOCAL CHARGES	"	5,715
TOTAL AMOUNT REMITTABLE	USD	77,115

*EXCHANGE RATE RULING WILL BE THE ONE APPLICABLE ON THE DAY
OUR ACCOUNT IS CREDITED WITH FUNDS.

THIS PROFORMA IN YEN IS VALID FOR 14 DAYS FROM THIS DAY, **13/11/2008**
OTHER DETAILS AS PER ATTACHED TERMS AND CONDITIONS OF SALE.

**REMARKS: DO NOT DEDUCT WITH-HOLDING TAX AS
PER TRA CERTIFICATE NO. 0069515**

Branches: **Dar es Salaam:** P.O. Box 9060, Dar es Salaam, Tel.: 2118990-4, Fax: (255) 2112987/2118994, **Tanga:** Bombo Hospital Rd. P.O. Box 109, Tanga, Tel.: 027 2644668/46473, Fax: 027 2644669, **Arusha:** Goliondoi Rd, P.O. Box 194, Arusha, Tel.: 027 2508427, Fax: 027 2548426,
E-mail: sales@toyotatz.com • mkting@toyotatz.com • services@toyotatz.com • parts@toyotatz.com
Directors: Hatim A. Karimjee (Chairman) • Mahmood A. Karimjee (Managing Director) • Nazim A. Karimjee





TOYOTA TANZANIA LTD

No. 5 Nyerere Road
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Tel.: (255) 22-2866815-8, 2866353-8
Fax: (255) 22-2866814, 2861293
Web: www.toyotatz.com

ISSUING BRANCH

NYERERE RD.

TIN 100-146-304

VRN 10-006645-E

13/11/2008

PROFORMA INVOICE NO. PF/CON/PR/O2/22093 R

IMPORTANT: THIS NUMBER MUST BE QUOTED
IN ALL CORRESPONDENCE AND WHEN
REMITTING PAYMENT.

MAKONDE CEMENT
P O BOX 767
MTWARA

Dear Mr. N. Garden

In response to your recent inquiry for **Toyota Landcruiser Station Wagon GX Automatic** we have pleasure in quoting for the following on behalf of the suppliers, as per terms and conditions attached.

MODEL: VDJ200R-GNTNZ

COLOUR: Subject to order confirmation

AVAILABILITY: Subject to order confirmation

EQUIPPED WITH SPECIAL TANZANIA SPECIFICATIONS:

UNIT PRICE	Yen	6,361,200
QUANTITY UNITS REQUIRED:		1
TOTAL PRICE	Yen	6,361,200
* AT CURRENT EXCHANGE RATE: EQUIVALENT TO	USD	68,651
IMPORT DUTY (N/A)	"	0
EXCISE DUTY (N/A)	"	0
VAT (N/A)	"	0
LOCAL CHARGES	"	3,143
TOTAL AMOUNT REMITTABLE	USD	71,794

*EXCHANGE RATE RULING WILL BE THE ONE APPLICABLE ON THE DAY
OUR ACCOUNT IS CREDITED WITH FUNDS.

THIS PROFORMA IN YEN IS VALID FOR 14 DAYS FROM THIS DAY, **13/11/2008**
OTHER DETAILS AS PER ATTACHED TERMS AND CONDITIONS OF SALE.

REMARKS: DO NOT DEDUCT WITH-HOLDING TAX AS
PER TRA CERTIFICATE NO. 0069515

Branches: **Dar es Salaam:** P.O. Box 9060, Dar es Salaam, Tel.: 2118990-4, Fax: (255) 2112987/2118994, **Tanga:** Bombo Hospital Rd. P.O. Box 109, Tanga, Tel.: 027 2644668/46473, Fax: 027 2644669, **Arusha:** Goliiondoi Rd, P.O. Box 194, Arusha, Tel.: 027 2508427, Fax: 027 2548426,
E-mail: sales@toyotatz.com • mkting@toyotatz.com • services@toyotatz.com • parts@toyotatz.com
Directors: Hatim A. Karimjee (Chairman) • Mahmood A. Karimjee (Managing Director) • Nazim A. Karimjee





TOYOTA TANZANIA LTD

No. 5 Nyerere Road
P.O. Box 9060, Dar es Salaam, Tanzania
Tel.: (255) 22-2866815-8, 2866353-8
Fax: (255) 22-2866814, 2861293
Web: www.toyotatz.com

ISSUING BRANCH

TIN 100-146-304

13/11/2008

NYERERE RD.

VRN 10-006645-E

PROFORMA INVOICE NO. PF/CON/PR/O2/22095 R

IMPORTANT: THIS NUMBER MUST BE QUOTED
IN ALL CORRESPONDENCE AND WHEN
REMITTING PAYMENT.

MAKONDE CEMENT
P O BOX 767
MTWARA

Dear Mr. N. Garden

In response to your recent inquiry for **Daihatsu Delta Truck** we have pleasure
in quoting for the following on behalf of the suppliers, as per terms and conditions attached.

MODEL:V116R-HU2

COLOUR: Subject to order confirmation

AVAILABILITY: Subject to order confirmation

EQUIPPED WITH SPECIAL TANZANIA SPECIFICATIONS:

UNIT PRICE	Yen	2,630,980
QUANTITY UNITS REQUIRED:		3
TOTAL PRICE	Yen	7,892,940
* AT CURRENT EXCHANGE RATE: EQUIVALENT TO	USD	85,182
IMPORT DUTY (N/A)	"	0
EXCISE DUTY (N/A)	"	0
VAT (N/A)	"	0
LOCAL CHARGES	"	9,429
TOTAL AMOUNT REMITTABLE	USD	94,611

*EXCHANGE RATE RULING WILL BE THE ONE APPLICABLE ON THE DAY
OUR ACCOUNT IS CREDITED WITH FUNDS.

THIS PROFORMA IN YEN IS VALID FOR 14 DAYS FROM THIS DAY, **13/11/2008**
OTHER DETAILS AS PER ATTACHED TERMS AND CONDITIONS OF SALE.

REMARKS: DO NOT DEDUCT WITH-HOLDING TAX AS
PER TRA CERTIFICATE NO. 0069515

Branches: **Dar es Salaam:** P.O. Box 9060, Dar es Salaam, Tel.: 2118990-4, Fax: (255) 2112987/2118994, **Tanga:** Bombo Hospital Rd. P.O. Box 109, Tanga,
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E-mail: sales@toyotatz.com • mkting@toyotatz.com • services@toyotatz.com • parts@toyotatz.com
Directors: Hatim A. Karimjee (Chairman) • Mahmood A. Karimjee (Managing Director) • Nazim A. Karimjee





TOYOTA TANZANIA LTD

No. 5 Nyerere Road
P.O. Box 9060, Dar es Salaam, Tanzania
Tel.: (255) 22-2866815-8, 2866353-8
Fax: (255) 22-2866814, 2861293
Web: www.toyotatz.com

ISSUING BRANCH

TIN 100-146-304

13/11/2008

NYERERE RD.

VRN 10-006645-E

PROFORMA INVOICE NO. PF/CON/PR/O2/22094 R
IMPORTANT: THIS NUMBER MUST BE QUOTED
IN ALL CORRESPONDENCE AND WHEN
REMITTING PAYMENT.

MAKONDE CEMENT
P O BOX 767
MTWARA

Dear Mr. N. Garden

In response to your recent inquiry for **Toyota Coaster Bus 26 Seater** we have pleasure in quoting for the following on behalf of the suppliers, as per terms and conditions attached.

MODEL:BB42R-BRMRS

COLOUR: Subject to order confirmation

AVAILABILITY:Subject to order confirmation

EQUIPPED WITH SPECIAL TANZANIA SPECIFICATIONS:

UNIT PRICE	Yen	5,834,000
QUANTITY UNITS REQUIRED:		1
TOTAL PRICE	Yen	5,834,000
* AT CURRENT EXCHANGE RATE: EQUIVALENT TO	USD	62,961
IMPORT DUTY (N/A)	"	0
EXCISE DUTY (N/A)	"	0
VAT (N/A)	"	0
LOCAL CHARGES	"	3,143
TOTAL AMOUNT REMITTABLE	USD	66,104

*EXCHANGE RATE RULING WILL BE THE ONE APPLICABLE ON THE DAY
OUR ACCOUNT IS CREDITED WITH FUNDS.

THIS PROFORMA IN YEN IS VALID FOR 14 DAYS FROM THIS DAY, **13/11/2008**
OTHER DETAILS AS PER ATTACHED TERMS AND CONDITIONS OF SALE.

REMARKS: DO NOT DEDUCT WITH-HOLDING TAX AS
PER TRA CERTIFICATE NO. 0069515

Branches: **Dar es Salaam:** P.O. Box 9060, Dar es Salaam, Tel.: 2118990-4, Fax: (255) 2112987/2118994, **Tanga:** Bombo Hospital Rd. P.O. Box 109, Tanga, Tel.: 027 2644668/46473, Fax: 027 2644669, **Arusha:** Goliiondoi Rd, P.O. Box 194, Arusha, Tel.: 027 2508427, Fax: 027 2548426,

E-mail: sales@toyotatz.com • mkting@toyotatz.com • services@toyotatz.com • parts@toyotatz.com

Directors: Hatim A. Karimjee (Chairman) • Mahmood A. Karimjee (Managing Director) • Nazim A. Karimjee





TOYOTA TANZANIA LTD

No. 5 Nyerere Road
P.O. Box 9060, Dar es Salaam, Tanzania
Tel.: (255) 22-2866815-8, 2866353-8
Fax: (255) 22-2866814, 2861293
Web: www.toyotatz.com

ISSUING BRANCH

NYERERE RD.

TIN 100-146-304

VRN 10-006645-E

11/2/2008

PROFORMA INVOICE NO. PF/CON/PR/O2/22100
IMPORTANT: THIS NUMBER MUST BE QUOTED
IN ALL CORRESPONDENCE AND WHEN
REMITTING PAYMENT.

MAKONDE CEMENT
P O BOX 767
MTWARA

Dear Mr. N. Garden

In response to your recent inquiry for **Toyota Hilux 4WD Single Cabin** we have pleasure in quoting for the following on behalf of the suppliers, as per terms and conditions attached.

MODEL:LAN25R-TRMDEN

COLOUR: Subject to order confirmation

AVAILABILITY: Subject to order confirmation

EQUIPPED WITH SPECIAL TANZANIA SPECIFICATIONS:

UNIT PRICE	USD	19,750
QUANTITY UNITS REQUIRED:		3
TOTAL PRICE	USD	59,250
* AT CURRENT EXCHANGE RATE: EQUIVALENT TO	USD	59,250
IMPORT DUTY (N/A)	"	0
EXCISE DUTY (N/A)	"	0
TAX (N/A)	"	0
LOCAL CHARGES	"	5,715
TOTAL AMOUNT REMITTABLE	USD	64,965

*EXCHANGE RATE RULING WILL BE THE ONE APPLICABLE ON THE DAY
OUR ACCOUNT IS CREDITED WITH FUNDS.

THIS PROFORMA IN YEN IS VALID FOR 14 DAYS FROM THIS DAY, **11/02/2008**
OTHER DETAILS AS PER ATTACHED TERMS AND CONDITIONS OF SALE.

**REMARKS: DO NOT DEDUCT WITH-HOLDING TAX AS
PER TRA CERTIFICATE NO. 0069515**



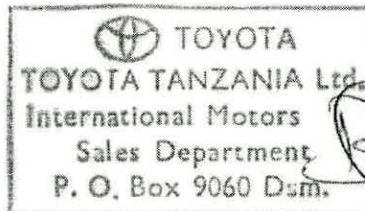


TOYOTA TANZANIA LTD

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P.O. Box 9060, Dar es Salaam, Tanzania
Tel.: (255) 22-2866815-8, 2866353-8
Fax: (255) 22-2866814, 2861293
Web: www.toyotatz.com

Makonde Cement,
P. O. Box 767,
Mtwara.

S/N	DESCRIPTION	MODEL	QTY	UNIT PRICE	LOCAL COST PER UNIT	TOTAL AMOUNT
1	TOYOTA HILUX 4WD DOUBLE CABIN	LAN25R-PRMDEN	3	USD: 22,950	USD: 1,905	USD: 74,565
2	TOYOTA HILUX 4WD SINGLE CABIN	LAN25R-TRMDEN	3	USD: 19,750	USD: 1,905	USD: 64,965
3	TOYOTA L/CRUISER VX AUTOMATIC	VDJ200R-GNTEZ	1	USD: 65,545	USD: 3,143	USD: 68,688
4	TOYOTA L/CRUISER GX AUTOMATIC	VDJ200R-GNTNZ	1	USD: 58,408	USD: 3,143	USD: 61,551
5	TOYOTA COASTER BUS 26 SEATER	BB42R-BRMRS	1	USD: 53,233	USD: 3,143	USD: 56,376
6	DAIHATSU DELTA TRUCK 3.5 TON	V116R-HU2	3	USD: 23,538	USD: 3,143	USD: 80,046
		TOTAL	12			USD: 406,191



Branches: Dar es Salaam: P.O. Box 9060, Dar es Salaam, Tel.: 2118990-4, Fax: (255) 2112987, Tanga: Bombo Hospital Rd. P.O. Box 109, Tanga, Tel.: 027 2644668/46473, Fax: 027 2644669, Arusha: Gollondoi Rd, P.O. Box 194, Arusha, Tel.: 027 2508427, Fax: 027 2548426,
E-mail: sales@toyotatz.com • mking@toyotatz.com • services@toyotatz.com • parts@toyotatz.com
Directors: Hatim A. Karimjee (Chairman) • Mahmood A. Karimjee (Managing Director) • Nazim A. Karimjee



MAKONDE CEMENT LTD

SECTION 1: Covering Letter

**SECTION 2: ROC 460 PC & ROC 460 HF PC
Crawler Rigs**

SECTION 3: RDT (Rock Drilling Tools) Contacts

SECTION 2:

**Re: Supply, delivery and commissioning of the Atlas Copco
ROC 460 PC Drill Rig.**

INVESTMENT VALUE: OUTRIGHT PURCHASE

EQUIPMENT	COST/UNIT ®
ROC 460 PC Drill Rig	R1 100 00.00
ROC 460 HF PC Drill Rig	R1 300 00.00
XRHS 366 Compressor 775CFM, 20bar Contact Person: Pieter Viljoen (0836333832)	+R 695,000.00

*56k
553 500
= 45 \$ 1. = 8.00
\$69 188.00*

Excl VAT and site delivery

The above pricing does not include 14% vat or additional site specific modifications. If applicable, this will be calculated once the additional requirements are forwarded to the originator.

Included in the purchase of the drill rig

EQUIPMENT
3 Rods
1 DTH Bit
1 DTH Hammer

Availability:

8 – 12 weeks from date of order and proof of sales.
Unit is offered subject to prior sale.

Validity

The above proposal is valid for a period of 14 working days from the above date.

Exchange Rate

The prices quoted are based on R1.00 = 0.79 SEK. Any fluctuation on the date of order will be for the clients account.

SECTION 3:

RDT (Rock Drilling Tools) Contacts

Rashid Ismail
011 821 9363

Alan vd Bergh
Product Manager RTD Surface Equipment
083 627 0019
alan.van.der.bergh@za.atlascopco.com

Len Botha
Business Line Manager RDT
0836340636
len.botha@za.atlascopco.com

25 SEPTEMBER 2008

MAKONDE DEVELOPMENT COMPANY LTD

PO Box 767
Mtwara
Tanzania

Attention: Mr. Neil Garden,

**Re: Supply, delivery and commissioning of the Atlas Copco
ROC 460 PC Drill Rig.**

We thank you for interest in Atlas Copco mining equipment and for affording us the opportunity to submit our quotation for your consideration.

Atlas Copco is submitting the proposal based on the supply of:

One only Atlas Copco ROC 460 pneumatic crawler drill rig.

This high performance drill rig, has the Atlas Copco's commitment to after sales service and spares availability that will meet all your requirements.

We trust our proposal is considered favorably and should there be any questions please do not hesitate to contact us.

Assuring you of our best service at all times.

Yours faithfully

Cobi Scheepers
Area Sales Manager – Surface Drilling Equipment
Atlas Copco SA (Pty) Ltd
Cell: 083 634 0659

VAT NUMBER 10-006803-Y

TIN 100-146-193
27 November 2008

MAKONDI CEMENT LIMITED
P.O. BOX 767
MTWARA
TANZANIA

Attn: Mr. Neil Garden
Sir,

RE: PROFORMA INVOICE REF No: Q32 NOV 08 725

Mantrac Tanzania Limited is pleased to present the following machines for your consideration:

Two {2} NEW CATERPILLAR 725 Articulated Dump Trucks

New **Caterpillar Articulated Truck Model 725**, includes diesel engine delivers 309HP, electric starting, power shift transmission, alternator, lighting system, horn, suspension seat with seat belt.

EQUIPPED WITH :

- ROPS Cab with Air conditioner
- 23.5R25 Tiers

PRICE:

Net selling price Ex Mantrac Yard, Dar es Salaam
20% VAT
TOTAL PRICE

One unit

US \$ 325,000.-
US \$ 65,000.-
US \$ 390,000.-

One unit

US \$ 650,000.-
US \$ 130,000.-
US \$ 780,000.-

Origin: England

VALIDITY: Our prices are valid for 30 days from date of issue.

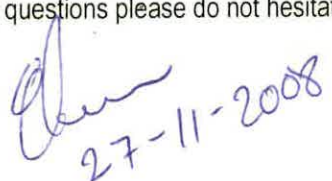
DELIVERY PERIOD: 6-12 weeks from date of order confirmation and payment of initial deposit.

WARRANTY: 12 Months.

PAYMENT TERMS: 50% down payment and balance upon collection of the machine from dealer yard.

"All business is conducted in accordance with Mantrac Tanzania Ltd., standard conditions of sale, which will be made available on request and which may vary from time to time".

If you have any questions please do not hesitate to contact us. We look forward to your forthcoming order.
Regards,



Glenn Malya
MACHINE SALES REPRESENTATIVE

MANTRAC

Plot 4 A, Nyerere Road
P.O. Box 9262
Dar es Salaam
Tel: +(255) 22 286 0160/1/2
Fax: +(255) 22 286 4284
Email: mantrac@mantractanzania.com

MANTRAC

Plots 60 & 61, Nyakato Road
P.O. Box 433
Mwanza
Tel: +(255) 28 250 2205
Fax: +(255) 28 250 0353
Email: mwanza@mantractanzania.com

MANTRAC

Plot5, Boma Road
P.O. Box 549
Moshi
Tel: +(255) 27 275 1711
Fax: +(255) 27 275 1709
Email: moshi@mantractanzania.com

MANTRAC

GOFU, Plot 11 Industrial Area
P.O. Box 981
Tanga
Tel: +(255) 27 264 2987
: +(255) 27 264 6231
Email: tanga@mantractanzania.com



VAT NUMBER 10-006803-Y

TIN 100-146-193
17 November 2008

MAKONDI CEMENT LIMITED
P.O. BOX 767
MTWARA
TANZANIA

Attn: Mr. Neil Garden
Sir,

RE: PROFORMA INVOICE REF No: Q21 NOV 08 D6T

Mantrac Tanzania Limited is pleased to present the following machines for your consideration:

One {1} NEW CATERPILLAR D6T DOZER

POWERTRAIN

CAT C-9 diesel engine with 24-volt electric starting, **Delivers 189HP** Air to Air After Cooler (ATAAC) Advanced Modular Cooling System (AMOCS) Powershift transmission Automatic kickdown (Auto downshift) Automatic shift (2R-1F, 2R-2F) Clutch and brake steering

UNDERCARRIAGE

Hydraulic track adjuster Lifetime lubricated idlers Lifetime lubricated track rollers End track guiding guards

EQUIPPED WITH:

- STD UNDERCARRIAGE
- 560MM TRACK
- ROPS CAB
- FINGER TIP CONTROL (FTC)
- 6SU-BULLDOZER, COMPLETE
- A/C

PRICE:

Net selling price Ex Mantrac Yard, Dar es Salaam
20% VAT
TOTAL PRICE

One unit

US \$ 313,000.-
US \$ 62,600.-
US \$ 375,600.-

VALIDITY: Our prices are valid for 30 days from date of issue.

DELIVERY PERIOD: 6-12 weeks from date of order confirmation and payment of initial deposit.

WARRANTY: Caterpillar machines are guaranteed against faulty workmanship for a period of 12 months from initial date of operation by end user.

PAYMENT TERMS: 50% down payment and balance upon collection of the machine from dealer yard.

"All business is conducted in accordance with Mantrac Tanzania Ltd., standard conditions of sale, which will be made available on request and which may vary from time to time".

If you have any questions please do not hesitate to contact us. We look forward to your forthcoming order.
Regards,

Glenn Malya
MACHINE SALES REPRESENTATIVE

MANTRAC

Plot 4 A, Nyerere Road
P.O. Box 9262
Dar es Salaam
Tel: +(255) 22 286 0160/1/2
Fax: +(255) 22 286 4284
Email: mantrac@mantractanzania.com

MANTRAC

Plots 60 & 61, Nyakato Road
P.O. Box 433
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Tel: +(255) 28 250 2205
Fax: +(255) 28 250 0353
Email: mwanza@mantractanzania.com

MANTRAC

Plot5, Boma Road
P.O. Box 549
Moshi
Tel: +(255) 27 275 1711
Fax: +(255) 27 275 1709
Email: moshi@mantractanzania.com

MANTRAC

GOFU, Plot 11 Industrial Area
P.O. Box 981
Tanga
Tel: +(255) 27 264 2987
: +(255) 27 264 6231
Email: tanga@mantractanzania.com

VAT NUMBER 10-006803-Y

TIN 100-146-193

17 November 2008

MAKONDI CEMENT LIMITED
P.O. BOX 767
MTWARA
TANZANIA

Attn: Mr. Neil Garden
 Sir,

PROFORMA INVOICE REF. NO. Q22 NOV 08 D6GII

Please find here under our Pro forma invoice for the supply of
One NEW CATERPILLAR Track Type Tractor Model D6GII

POWERTRAIN

CAT 3306 DIT Engine @ 160 FWHP, Air cleaner with precleaner, Blower fan, Double reduction final drives, Fuel priming pump (manual), Water separator, Muffler with curved tip, Power shift transmission (3F-3R), Single brake pedal (actuates both tracks)

EQUIPPED WITH:

- Cab, Non rops
- Lights, 2 Front
- Lighting, Rear For Cab
- 3 Ripper shanks
- Hydraulics 3 valves

PRICE :

Net selling price Ex Mantrac Yard Dar es Salaam
 20% VAT
Total Price

For one unit

USD 224,000.00
 USD 44,800.00
 USD 268,800.00

VALIDITY : Our prices are valid for 30 days from date of issue.

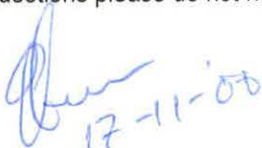
DELIVERY : January 2009 for stock units in Transit. Standard availability 10 – 16 weeks from date of confirmation.

TERMS OF PAYMENT : 50% with order, 50% balance prior to delivery of machine.

"All business is conducted in accordance with Mantrac Tanzania Ltd., standard conditions of sale, which will be made available on request and which may vary from time to time".

If you have any questions please do not hesitate to contact us. We look forward to your forthcoming order.

Regards,



Glenn Malya
MACHINE SALES REPRESENTATIVE

MANTRAC

Plot 4 A, Nyerere Road
 P.O. Box 9262
 Dar es Salaam
 Tel: +(255) 22 286 0160/1/2
 Fax: +(255) 22 286 4284
 Email: mantrac@mantractanzania.com

MANTRAC

Plots 60 & 61, Nyakato Road
 P.O. Box 433
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 Tel: +(255) 28 250 2205
 Fax: +(255) 28 250 0353
 Email: mwanza@mantractanzania.com

MANTRAC

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 Email: moshi@mantractanzania.com

MANTRAC

GOFU, Plot 11 Industrial Area
 P.O. Box 981
 Tanga
 Tel: +(255) 27 264 2987
 : +(255) 27 264 6231
 Email: tanga@mantractanzania.com

VAT NUMBER 10-006803-Y

TIN 100-146-193
17 November 2008

MAKONDI CEMENT LIMITED
P.O. BOX 767
MTWARA
TANZANIA

Attn: Mr. Neil Garden
Sir,

PROFORMA INVOICE REF. NO. Q23 NOV 08 330D L

Please find here under our Pro forma invoice for the supply of

One (1) New **CATERPILLAR 330DL Track-Type Excavator**
Includes CAT diesel engine delivers **270 HP (Net)**,
with direct electric starting, alternator,
cab, suspension seat, cab lights.

EQUIPPED WITH :

- Joystick, thumb wheel
- Boom reach, 6.5mt
- Stick, 3.2 m
- Hammer Lines
- Bucket, Excavation, 1.95 cum
- track, 850 mm

PRICE:

Net selling price Ex Mantrac Yard Dar es Salaam
20% VAT
TOTAL

For one unit
US \$ 320,000.-
US \$ 64,000.-
US \$ 384,000.-

VALIDITY : Our prices are valid for 30 days from date of issue.

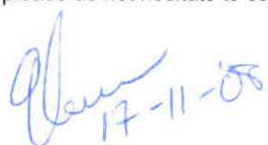
DELIVERY : Immediately, Machines is available in stock.

TERMS OF PAYMENT : 20% with order and balance be paid prior to collection of machine.

"All business is conducted in accordance with Mantrac Tanzania Ltd., standard conditions of sale, which will be made available on request and which may vary from time to time".

If you have any questions please do not hesitate to contact us. We look forward to your forthcoming order.

Regards,



Glenn Malya
MACHINE SALES REPRESENTATIVE

MANTRAC

Plot 4 A, Nyerere Road
P.O. Box 9262
Dar es Salaam
Tel: +(255) 22 286 0160/1/2
Fax: +(255) 22 286 4284
Email: mantrac@mantractanzania.com

MANTRAC

Plots 60 & 61, Nyakato Road
P.O. Box 433
Mwanza
Tel: +(255) 28 250 2205
Fax: +(255) 28 250 0353
Email: mwanza@mantractanzania.com

MANTRAC

Plot5, Boma Road
P.O. Box 549
Moshi
Tel: +(255) 27 275 1711
Fax: +(255) 27 275 1709
Email: moshi@mantractanzania.com

MANTRAC

GOFU, Plot 11 Industrial Area
P.O. Box 981
Tanga
Tel: +(255) 27 264 2987
: +(255) 27 264 6231
Email: tanga@mantractanzania.com



VAT NUMBER 10-006803-Y

TIN 100-146-193
17 November 2008

MAKONDI CEMENT LIMITED
P.O. BOX 767
MTWARA
TANZANIA

Attn: Mr. Neil Garden
Sir,

RE: PRO FORMA INVOICE REF. NO Q24 NOV 08 950H

Mantrac Tanzania Limited is pleased to present the following machines for your consideration:

New **CATERPILLAR 950H Wheel Loader**, includes CAT diesel engine delivers 219 HP, with direct electric starting, power shift transmission, alternator, torque converter, lighting system, bucket positioner, automatic lift kick out, all wheel drive.

EQUIPPED WITH :

- Rops Cabin
- Tiers 23.5R25
- Rock Bucket 3.1CUM, 2985mm

PRICES

Net selling price Ex Mantrac yard Dar es Salaam	One Unit US\$ 258,000.00
20% VAT	US\$ 51,600.00
TOTAL PRICE	US\$ 309,600.00

VALIDITY: 30 days from date of issue.

DELIVERY : 14 – 16 weeks from date of order confirmation.

TERMS OF PAYMENT : 50% down payment and 50% balance prior to collection of machine from dealer yard.

"All business is conducted in accordance with Mantrac Tanzania Ltd., standard conditions of sale, which will be made available on request and which may vary from time to time".

If you have any questions please do not hesitate to contact us. We look forward to your forthcoming order.

Regards,

Glenn Malya
0784 46 9999
MACHINE SALES REPRESENTATIVE

MANTRAC

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P.O. Box 9262
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Fax: +(255) 27 264 6231
Email: tanga@mantractanzania.com

VRN: 10-006803-Y

TIN NO. 100-146-193

PROFORMA INVOICE

Our Ref: T677/PM/2008

27th November 2008

Makonde Cement,
P.o.Box
MTWARA.

OPTION I; For the Sound Proof Canopy

TWO Caterpillar Generator set complete with sound attenuated enclosure (canopy). Prime rated at 1500rpm, 50Hz, 380-415Volts, 3 phase, and 0.8pf.

PRICE: Ex – Mantrac – DSM

MODEL	DESCRIPTION	QTY	UNIT PRICE USD \$	EXTENDED PRICE USD \$
C18	Prime rated 500kVA/400kW	1	102,000.00	102,000.00
AMF	Automatic Change Over Switch	1	8,000.00	8,000.00
3412STA	Prime rated 725kVA/ 580kW	1	151,600.00	151,600.00
AMF	Automatic Change Over Switch	1	10,000.00	10,000.00
Sub Total				
20% VAT				
TOTAL PRICE				

Country of Origin: U K

Delivery: 14 weeks from date of your order confirmation.

Validity: Prices will remain valid for 30 days from the date of this quotation.

Payment Terms: Full payment before collection.

Condition of Sale: All business is conducted in accordance with Mantrac (T) Ltd., standard conditions of sale, which will be made available on request and which may vary from time to time.

Warranty: Caterpillar engines and attachments are covered by Caterpillar's **warranty against faulty workmanship or material for a period of twelve months**, commencing at the delivery date to the end user.

Note: The prices are Vat Exclusives and do not include the installation charges.

Should you have any question, please do not hesitate to contact us

Thanks for choosing to buy CATERPILLAR


Peter Musiba

Power Systems Sales Representative

MANTRAC

Plot 4 A, Nyerere Road
P.O. Box 9262
Dar es Salaam
Tel: +(255) 22 286 0160/1/2
Fax: +(255) 22 286 4284
Email: mantrac@mantractanzania.com

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MANTRAC

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Tel: +(255) 27 264 2987
; +(255) 27 264 6231
Email: tanga@mantractanzania.com



VRN: 10-006803-Y

TIN NO. 100-146-193

PROFORMA INVOICE

Our Ref: T678/PM/2008

27th November 2008

Makonde Cement,
P.o.Box
MTWARA.

OPTION II; For the OPENSET

TWO Caterpillar Generator set complete without sound attenuated enclosure OPENSET.
Prime rated at 1500rpm, 50Hz, 380-415Volts, 3 phase, and 0.8pf.

PRICE: Ex – Mantrac – DSM

MODEL	DESCRIPTION	QTY	UNIT PRICE USD \$	EXTENDED PRICE USD \$
C18	Prime rated 500kVA/400kW	1	77,500.00	77,500.00
AMF	Automatic Change Over Switch	1	8,000.00	8,000.00
3412STA	Prime rated 725kVA/ 580kW	1	126,500.00	126,500.00
AMF	Automatic Change Over Switch	1	10,000.00	10,000.00
			Sub Total	
			20% VAT	
			TOTAL PRICE	

Country of Origin: U K

Delivery: 14 weeks from date of your order confirmation.

Validity: Prices will remain valid for 30 days from the date of this quotation.

Payment Terms: Full payment before collection.

Condition of Sale: All business is conducted in accordance with Mantrac (T) Ltd., standard conditions of sale, which will be made available on request and which may vary from time to time.

Warranty: Caterpillar engines and attachments are covered by Caterpillar's **warranty against faulty workmanship or material for a period of twelve months**, commencing at the delivery date to the end user.

Note: The prices are Vat Exclusives and do not include the installation charges.

Should you have any question, please do not hesitate to contact us

Thanks for choosing to buy CATERPILLAR

Peter Musiba
Power Systems Sales Representative

MANTRAC

Plot 4 A, Nyerere Road
P.O. Box 9262
Dar es Salaam

MANTRAC

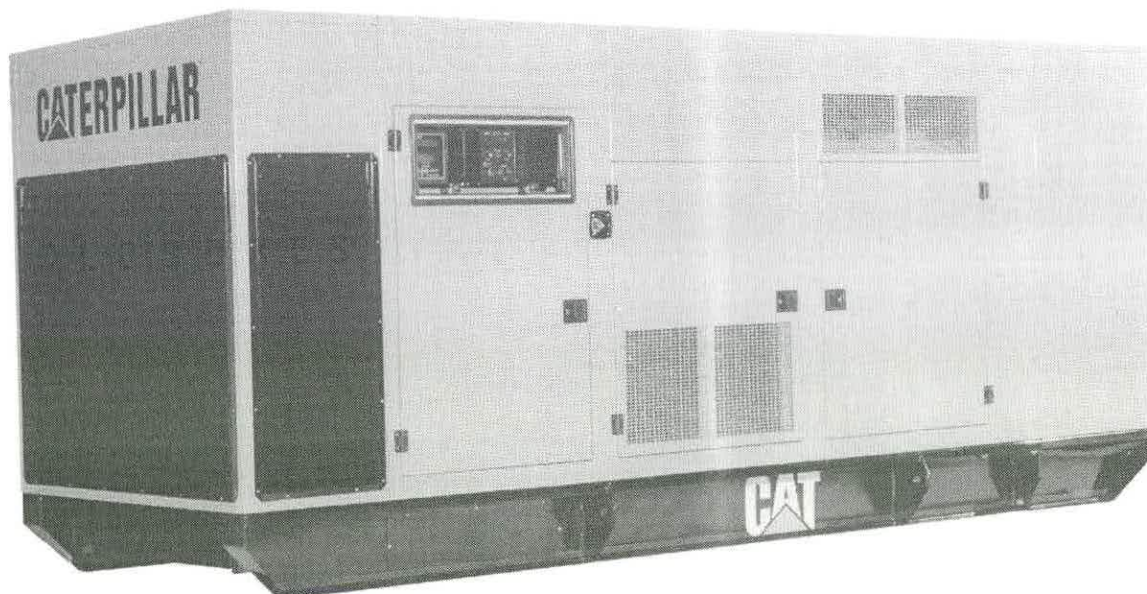
Plots 60 & 61, Nyakato Road
P.O. Box 433
Mwanza

MANTRAC

Plot5, Boma Road
P.O. Box 549
Moshi

MANTRAC

GOFU, Plot 11 Industrial Area
P.O. Box 981
Tanga

**SOUND ATTENUATED
WEATHER PROTECTIVE****FEATURES (SOUND ATTENUATED AND WEATHER PROTECTIVE)**

- Durable weather-resistant enclosure with galvanized steel and zinc phosphate treatment for corrosion resistance
- Environmentally friendly, polyester powder baked paint enhances durability and appearance
- Safety glass, control panel viewing window is standard for easy monitoring of operation.
- Externally mounted emergency stop button provides for safe operation
- Zinc-plated doors equipped with rust-free stainless steel locks and hinges
- Lockable enclosure secures access to fuel fill, oil fill, coolant, and battery
- Enclosures designed for spreader-bar lifting to ensure safety
- Lube oil, coolant and fumes disposal lines piped to baseframe
- Exhaust silencing system housed within the enclosure for operator safety and maximum product life
- Enclosure design incorporates side-mounted circuit breaker and control panel and accepts a complete range of attachments
- Optional skid base with dragging points and fork truck pockets
- Optional interior maintenance light available
- Paint color: Caterpillar yellow, standard; white, optional
- Factory installed

CE

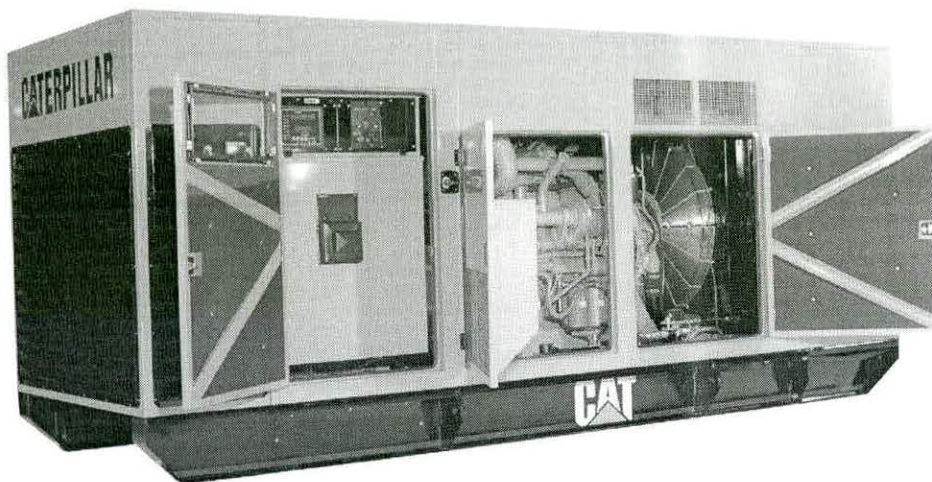
SOUND ATTENUATED ENCLOSURE OPERATING CHARACTERISTICS

Generator Set Standby Rating 50 Hz — kVA 60 Hz — kW	50 Hz (1500 rpm)					60 Hz (1800 rpm)			
	EEC	dBA @ Full Load		Ambient* °C (°F)		dBA @ Full Load		Ambient* °C (°F)	
		1 m	7 m	SB	PP	1 m	7 m	SB	PP
500	LWA 99	82	72	58 (136)	55 (131)	85	73	56 (132)	54 (129)
550	LWA 99	83	72	58 (136)	55 (131)	85	73	56 (132)	54 (129)
600	LWA 99	83	72	58 (136)	56 (132)	85	73	54 (129)	51 (123)
650	LWA 99	83	72	55 (131)	53 (127)	85	73	49 (120)	48 (118)
700	LWA 99	83	72	52 (125)	50 (122)	85	73	46 (114)	45 (113)
750	LWA 100	83	72	55 (131)	54 (129)	85	74	44 (111)	44 (111)
800	LWA 100	83	72	51 (123)	49 (120)	85	75	41 (105)	41 (105)
900	LWA 100	83	72	46 (114)	46 (114)	85	75	NA	NA

*Ambient measured with Caterpillar Extended Life Coolant

ENCLOSURE DIMENSIONS

	Sound Attenuated	Weather Protective
Dimensions:		
Length — mm (inch)	5900 (232)	5260 (207)
Height w/base — mm (inch)	2564 (101)	2564 (101)
Width w/base — mm (inch)	2238 (88)	2238 (88)
Approximate Weight of Package:		
500 kV•A/500 kW — kg (lb)	7945 (17 479)	7490 (16 515)
900 kV•A — kg (lb)	9270 (20 394)	8812 (19 430)



www.cat-engines.com

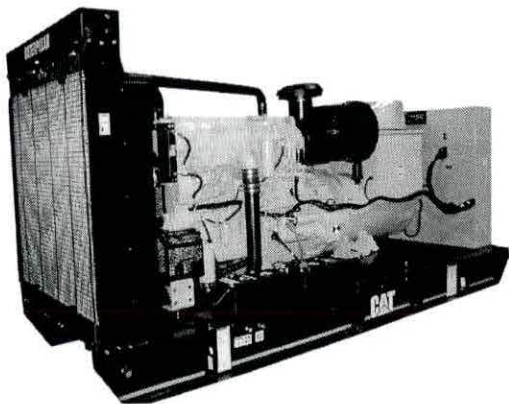
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Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.

DIESEL GENERATOR SET

CATERPILLAR®



PRIME

400 ekW 500 kVA
50 Hz 1500 rpm 400 Volts

Caterpillar is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

FEATURES

FUEL/EMISSIONS STRATEGY

- Low fuel consumption

COMPLETE, READY-TO-RUN SYSTEM

- Fully configured generator set
- Fully operational upon delivery - just add fuel and power cables

ENCLOSURES (optional)

- Sound attenuated

FULL RANGE OF ATTACHMENTS

- Wide range of bolt-on system expansion attachments, factory designed and tested

SINGLE-SOURCE SUPPLIER

- Fully prototype tested with certified torsional vibration analysis available
- Factory-designed systems built at Caterpillar ISO 9001:2000 certified facilities

WORLDWIDE PRODUCT SUPPORT

- Caterpillar® dealers provide extensive post sale support including maintenance and repair agreements
- Caterpillar dealers fill 99.7% of parts orders within 24 hours
- Caterpillar dealers have over 1,844 dealer branch stores operating in 166 countries
- The Cat® S•O•SSM program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

CAT C18 ATAAC DIESEL ENGINE

- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Four-stroke-cycle diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic controlled governor

CAT® GENERATOR

- Matched to the performance and output characteristics of Caterpillar engines
- 2/3 pitch minimizes harmonic distortion and facilitates parallel operation
- Load adjustment module provides engine relief upon load impact and improves load acceptance and recovery time
- UL 1446 Recognized Class H Insulation

CAT CONTROL PANELS

- Three levels of controls to meet individual customer needs:
 - EMCP 3.1 offers digital monitoring, metering, and protection
 - EMCP 3.2 offers EMCP II features plus full-featured power metering
 - EMCP 3.3 provides EMCP 3.2 features plus protective relaying
- Segregated low voltage (AC/DC) accessory box provides single point access to accessory connections

PRIME 400 ekW 500 kVA
50 Hz 1500 rpm 400 Volts



FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	<ul style="list-style-type: none"> • Single element canister type air cleaner • Service indicator 	<ul style="list-style-type: none"> • Dual element air cleaner • Heavy-duty air cleaner with precleaner • Air inlet shutoff
Cooling	<ul style="list-style-type: none"> • Radiator with guard sized for 50° C • Coolant level sight gauge • Coolant drain line with valve • Fan and belt guards • Caterpillar® Extended Life Coolant 	<ul style="list-style-type: none"> • Radiator duct flange • Low Coolant Level Sensor
Exhaust	<ul style="list-style-type: none"> • Stainless steel exhaust flex and ANSI weld flange • Turbo outlet elbow 	<ul style="list-style-type: none"> • 15 dBA muffler • 25 dBA muffler • 35 dBA muffler • Engine mounted muffler • Mounting and through-wall installation kits • Manifold and turbocharger guards
Exhaust	<ul style="list-style-type: none"> • Stainless steel exhaust flex and ANSI weld flange • Turbo outlet elbow 	<ul style="list-style-type: none"> • 20 dBA muffler • 30 dBA muffler • 15 dBA muffler • Engine mounted muffler with HD air cleaner • Engine mounted muffler with HD air cleaner • Elbow mounting and through-wall installation kits • Manifold and turbocharger guards
Fuel	<ul style="list-style-type: none"> • Primary and secondary fuel filters • Water separator • Fuel priming pump • Fuel pressure gauge • Flexible fuel lines 	<ul style="list-style-type: none"> • Integral single wall fuel tank • 8 hour narrow tank base • 16 hour wide tank base
Generator	<ul style="list-style-type: none"> • Self excited or AREP excitation • Class H insulation • Class H Temperature Rise (50 Hz 163° C standby/127° C prime) • Random wound • R448 Voltage Regulator with Load Adjustment Module • Power center power terminal strip connections • Segregated low voltage wiring panel • IP23 Protection 	<ul style="list-style-type: none"> • Permanent magnet conversion for self-excited and AREP generators • Oversize and premium generators • Three phase sensing • Quadrature droop kit • Space heaters • RFI filter • Circuit breaker, IEC compliant 3 or 4-pole (100% rated) • Floor standing circuit breakers with auxiliary contacts & cabling kits
Governor	<ul style="list-style-type: none"> • Electronic isochronous 	<ul style="list-style-type: none"> • Electronic load sharing
Control Panels	<ul style="list-style-type: none"> • EMCP 3.1 	<ul style="list-style-type: none"> • EMCP 3.2 • EMCP 3.3 • Local alarm and remote annunciator modules • Protective devices
Lube	<ul style="list-style-type: none"> • Lubricating oil and filter • Oil drain line with valves • Fumes disposal • Lube oil level indicator 	<ul style="list-style-type: none"> • Oil temperature sensor • Manual sump pump
Mounting	<ul style="list-style-type: none"> • Formed steel narrow base frame • Linear vibration isolators between base and engine generator 	<ul style="list-style-type: none"> • Formed steel wide base frame • Oil field skid base
Starting/Charging	<ul style="list-style-type: none"> • 45 amp charging alternator • 24 volt starting motor • Batteries with rack and cables • Safety shutoff protection 	<ul style="list-style-type: none"> • Jacket water heater • Integral 5 and 10 amp battery chargers • Oversize batteries • Ether starting aid • Battery disconnect switch • Battery removal
Other	<ul style="list-style-type: none"> • Paint - Caterpillar yellow except rails and radiators gloss black • SAE standard rotation • Flywheel and flywheel housing - SAE No. 0/18 	<ul style="list-style-type: none"> • Enclosures - sound attenuated (yellow or white) • CE certification

PRIME 400 kW 500 kVA

50 Hz 1500 rpm 400 Volts



SPECIFICATIONS

CAT GENERATOR

Frame size.....	LC6114F
Pitch.....	0.6667
Number of poles.....	4
Number of bearings.....	1
Number of leads.....	12
Insulation.....	UL 1446 Recognized Class H with tropicalization and antiabrasion
IP rating.....	Drip Proof IP22
Alignment.....	Pilot Shaft
Overspeed capability.....	125% of rated
Wave form deviation (Line to Line).....	0.002.00
Paralleling kit droop transformer.....	Standard
Voltage Regulator. 3 phase sensing with adjustable 1:1 or 2:1 Volts/Hz, UL508A Listed	
Voltage Regulation.....	Less than +/- 1/2% (steady state)
	Less than +/- 1/2% (w/ 3% speed change)
Telephone Influence Factor.....	Less than 50
Harmonic distortion.....	Less than 5%

CAT ENGINE

C18 ATAAC, 4-stroke-cycle watercooled diesel	
Bore - mm.....	145.00 mm (5.71 in)
Stroke - mm.....	183.00 mm (7.2 in)
Displacement - L.....	18.13 L (1106.36 in ³)
Compression ratio.....	14.5:1
Aspiration.....	Air-to-Air Aftercooled
Fuel system.....	Electronic unit injection
Governor type.....	Caterpillar ADEM control system

CAT CONTROL PANEL

- 24 Volt DC Control
- NEMA 1, IP22 enclosure
- Electrically dead front
- Generator instruments meet ANSI C-39-1
- Terminal box mounted
- Single location customer connector point
- EC Compliant - segregated AC/DC connections and wiring
- Consult your Caterpillar dealer for available voltages.

PRIME 400 ekW 500 kVA

50 Hz 1500 rpm 400 Volts



TECHNICAL DATA

Open Generator Set - - 1500 rpm/50 Hz/400 Volts	DM7671	
Low Fuel Consumption		
Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan	500 kVA 400 ekW	
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	102.9 L/hr 78.6 L/hr 56.4 L/hr	27.2 Gal/hr 20.8 Gal/hr 14.9 Gal/hr
Cooling System Ambient air temperature Air flow restriction (system) Air flow (max @ rated speed for radiator arrangement) Engine Coolant capacity with radiator/exp. tank Engine coolant capacity Radiator coolant capacity	57 °C 0.12 kPa 660 m ³ /min 71.3 L 20.8 L 50.5 L	135 °F 0.48 in. water 23308 cfm 18.8 gal 5.5 gal 13.3 gal
Exhaust System Combustion air inlet flow rate Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	30.5 m ³ /min 511.4 °C 84.7 m ³ /min 203 mm 10.0 kPa	1077.1 cfm 952.5 °F 2991.2 cfm 8 in 40.2 in. water
Heat Rejection Heat rejection to coolant (total) Heat rejection to exhaust (total) Heat rejection to atmosphere from engine Heat rejection to atmosphere from generator	141 kW 376 kW 69 kW 19.7 kW	8019 Btu/min 21383 Btu/min 3924 Btu/min 1120.3 Btu/min
Alternator Motor starting capability @ 30% voltage dip Frame Temperature Rise	1213 skVA LC6114F 125 °C	257 °F
Lube System Sump refill with filter	38.0 L	10.0 gal

Ambient capability at 200 m (660 ft) above sea level. For ambient capability at other altitudes, consult your Caterpillar dealer. Air flow restriction (system) is added to existing restriction from factory. Generator temperature rise is based on a 40° C (104° F) ambient per NEMA MG1-32.

PRIME 400 eKW 500 kVA

50 Hz 1500 rpm 400 Volts



RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: ABGSM TM3, AS1359, AS2789, BS4999, BS5000, BS5514, DIN6271, DIN6280, EGSA101P, IEC34/1, ISO3046/1, ISO8528, JEM1359, NEMA MG 1-22, VDE0530, 89/392/EEC, 89/336/EEC

Prime - Output available with varying load for an unlimited time. Prime power in accordance with ISO8528. 10% overload power in accordance with ISO3046/1, AS2789, DIN6271, and BS5514 available on request. Prime power ambients shown indicate ambient at 100 percent load which results in a coolant top tank temperature just below the alarm temperature.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046/1, DIN6271, and BS5514 standard conditions.

Fuel rates are based on fuel oil of 35° API [16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.). Additional ratings may be available for specific customer requirements. Consult your Caterpillar representative for details.

PRIME 400 ekW 500 kVA
50 Hz 1500 rpm 400 Volts



DIMENSIONS

Package Dimensions		
Length	4237.4 mm	166.83 in
Width	1536.0 mm	60.47 in
Height	2165.8 mm	85.27 in
Weight	3670 kg	8,091 lb

Note: Do not use for installation design.
See general dimension drawings for
detail (Drawing #2551279).

Performance No.: DM7671

Feature Code:: C18DE04

Source:: European Sourced

11 May 2005

4485810

www.CAT-ElectricPower.com

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Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.

DIESEL GENERATOR SET

CATERPILLAR®

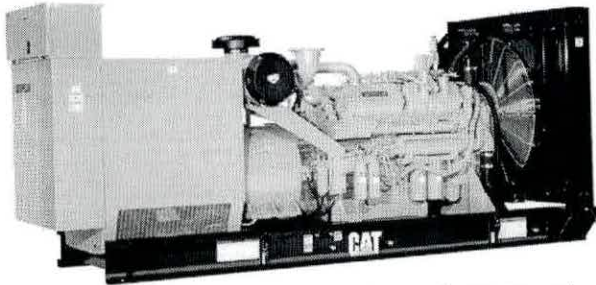


Image shown may not reflect actual package.

PRIME

580 ekW 725 kVA

50 Hz 1500 rpm 400 Volts

Caterpillar is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

FEATURES

FUEL/EMISSIONS STRATEGY

- Low fuel consumption

DESIGN CRITERIA

- The generator set accepts 100% rated load in one step.

FULL RANGE OF ATTACHMENTS

- Wide range of bolt-on system expansion attachments, factory designed and tested

SINGLE-SOURCE SUPPLIER

- Fully prototype tested with certified torsional vibration analysis available

WORLDWIDE PRODUCT SUPPORT

- Caterpillar® dealers provide extensive post sale support including maintenance and repair agreements
- Caterpillar dealers fill 99.7% of parts orders within 24 hours
- Caterpillar dealers have over 1,600 dealer branch stores operating in 200 countries
- The Cat® S•O•SSM program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

CAT® 3412C TA DIESEL ENGINE

- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Four-stroke-cycle diesel engine combines consistent performance and excellent fuel economy with minimum weight

CAT SR4B GENERATOR

- Designed to match the performance and output characteristics of Caterpillar diesel engines
- Optimum winding pitch for minimum total harmonic distortion and maximum efficiency
- Single point access to accessory connections
- UL 1446 recognized Class H insulation

CAT EMCP 3 SERIES CONTROL PANELS

- Controls designed to meet individual customer needs.
- EMCP 3 provides the option for full-featured power metering and protective relaying
- Segregated low voltage, AC/DC accessory box provides single point access to accessory connections
- Options to meet UL/CSA/NFPA
- Power Center provides convenient location for control panel, optional power terminal strips and optional circuit breakers

PRIME 580 kW 725 kVA

50 Hz 1500 rpm 400 Volts



FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	<ul style="list-style-type: none"> • Single element canister type air cleaner • Service indicator 	<ul style="list-style-type: none"> • Dual element air cleaner • Heavy-duty air cleaner
Cooling	<ul style="list-style-type: none"> • Radiator with guard • Coolant drain line with valve • Fan and belt guards • Caterpillar® Extended Life Coolant • Low coolant level alarm or shutdown 	<ul style="list-style-type: none"> • Radiator duct flange • Jacket water heater with shutoff valve • Heat exchanger and expansion tank
Exhaust	<ul style="list-style-type: none"> • Stainless steel exhaust flex and ANSI outlet flange 	<ul style="list-style-type: none"> • Mufflers (20, 25, or 30 dBA) • Elbow kit and through-wall installation kit • Manifold and turbocharger guards
Fuel	<ul style="list-style-type: none"> • Primary and secondary fuel filters • Water separator • Fuel priming pump • Flexible fuel lines • Fuel pressure gauge 	<ul style="list-style-type: none"> • Manual transfer pump • Choice of three Automatic Transfer Systems • Low fuel level alarm
Generator	<ul style="list-style-type: none"> • Self excited • Class H insulation • Class F temperature rise (105°C prime/130°C standby) • VR3F Voltage Regulator, 3-phase sensing, 2:1 Volts/Hz • Reactive droop • Extension box • Bus bar connection 	<ul style="list-style-type: none"> • Permanent magnet excited • Digital Voltage Regulator with KVAR/PF control • Anti-condensation space heater • Oversize and premium generators (except 648 kW Prime/720 kW Standby) • Circuit breakers, IEC Compliant, 3-pole or 4-pole with shunt trip
Governor	<ul style="list-style-type: none"> • PEEC - Cat Electronic 	<ul style="list-style-type: none"> • Electronic isochronous • Electronic load sharing
Control Panels	<ul style="list-style-type: none"> • EMCP 3.1 (mounted inside power center) • Rear facing • Speed adjust • Emergency stop pushbutton • Voltage adjustment 	<ul style="list-style-type: none"> • EMCP 3.2 & EMCP 3.3 • Right-hand mounting of control panel • Local annunciator modules (NFPA 99/110) • Remote annunciator modules (NFPA 99/110) • Discrete I/O module
Lube	<ul style="list-style-type: none"> • Lubricating oil and filter • Oil drain line with valves • Fumes disposal 	<ul style="list-style-type: none"> • Manual sump pump
Mounting	<ul style="list-style-type: none"> • Formed steel base • Linear vibration isolators between base and engine-generator 	<ul style="list-style-type: none"> • Skid base • Fuel tank base • Extended capacity fuel tank base
Starting/Charging	<ul style="list-style-type: none"> • 45 amp charging alternator • Energized to Run (ETR) fuel shutoff solenoid • 24 volt starting motor • Batteries with rack and cables 	<ul style="list-style-type: none"> • Heavy-duty starting system • 5 or 10 amp battery charger • Oversize batteries • Ether starting aid • Battery disconnect switch
General		<ul style="list-style-type: none"> • Enclosures - sound attenuated, weather protective • Automatic transfer switches (ATS) • Floor standing circuit breakers • EU Certificate of Conformance (CE)

PRIME 580 eKW 725 kVA

50 Hz 1500 rpm 400 Volts



SPECIFICATIONS

CAT SR4B GENERATOR

Frame Size.....	597
Excitation.....	Self Excited
Pitch.....	0.8000
Number of poles.....	4
Number of bearings.....	Single Bearing
Insulation.....	UL 1446 Recognized Class H with tropicalization and antiabrasion
IP Rating.....	Drip Proof IP22
Alignment.....	Pilot Shaft
Overspeed capability - % of rated.....	180
Wave form.....	Less than 5% deviation
Paralleling kit/Droop transformer.....	Standard
Voltage regulator.3 Phase sensing with selectable volts/Hz	
Voltage regulation.....	Less than +/- 1/2% (steady state)
Less than +/- 1% (no load to full load)	
Telephone Influence Factor.....	Less than 50
Harmonic distortion.....	Less than 5%

CAT DIESEL ENGINE

3412C TA V-12, 4-stroke-cycle watercooled diesel	
Bore - mm.....	137.20 mm (5.4 in)
Stroke - mm.....	152.40 mm (6.0 in)
Displacement - L.....	27.02 L (1648.86 in ³)
Compression Ratio.....	13.0:1
Aspiration.....	TA
Fuel system.....	Pump and Lines
Governor type.....	PEEC - Cat Electronic

CAT CONTROL PANELS

- EMCP III
 - 24 Volt DC Control
 - NEMA 1, IP22 enclosure
 - Terminal box mounted
 - Single location customer connection point
 - UL/CSA/CE/UL508A
 - Panel illuminating lights
 - Auto start/stop control
 - Voltage adjust potentiometer
 - True RMS AC metering
 - Digital indications for:
 - RPM
 - Operating hours
 - Oil pressure
 - Coolant Temperature
 - System DC volts
 - AC volts, phase amps, Hz
 - Shutdowns with indicating lights for:
 - Low oil pressure
 - High coolant temperature
 - Overspeed
 - Emergency Stop
 - Failure to start (overcrank)
 - Programmable protective relaying functions*:
 - Under and over voltage
 - Under and over frequency
 - Reverse power
 - Overcurrent
 - Low coolant level
 - 4 spare alarm/shutdown inputs
 - ModBus isolated data link (RS -485 half-duplex) supports serial communication at data rate up to 115.2 kbaud (*)
- * (Available on EMCP 3.2 & EMCP3.3)

PRIME 580 kW 725 kVA

50 Hz 1500 rpm 400 Volts



TECHNICAL DATA

Open Generator Set - - 1500 rpm/50 Hz/400 Volts	DM0627	
Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan	725 kVA 580 kW	
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	153.7 L/hr 117.5 L/hr 82.5 L/hr	40.6 Gal/hr 31.0 Gal/hr 21.8 Gal/hr
Cooling System¹ Ambient air temperature Air flow restriction (system) Air flow (max @ rated speed for radiator arrangement) Engine coolant capacity Radiator coolant capacity Engine Coolant capacity with radiator/exp. tank	54 ° C 0.12 kPa 1176 m ³ /min 59.0 L 84.0 L 143.0 L	129 ° F 0.48 in. water 41530 cfm 15.6 gal 22.2 gal 37.8 gal
Exhaust System Combustion air inlet flow rate Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	44.2 m ³ /min 534.0 ° C 125.4 m ³ /min 203.2 mm 6.7 kPa	1560.9 cfm 993.2 ° F 4428.5 cfm 8.0 in 26.9 in. water
Heat rejection Heat rejection to coolant (total) Heat rejection to exhaust (total) Heat rejection to atmosphere from engine Heat rejection to atmosphere from generator	347 kW 571 kW 95 kW 27.3 kW	19734 Btu/min 32473 Btu/min 5403 Btu/min 1552.5 Btu/min
Alternator² Motor starting capability @ 30% voltage dip Frame Temperature Rise	1815 skVA 597 105 ° C	189 ° F
Lube System Sump refill with filter	139.0 L	36.7 gal
Emissions³ NOx mg/nm ³ CO mg/nm ³ HC mg/nm ³ PM mg/nm ³	2932.1 mg/nm ³ 171.7 mg/nm ³ 102.6 mg/nm ³ 45 mg/nm ³	

¹ Ambient capability at 200 m (660 ft) above sea level. For ambient capability at other altitudes, consult your Caterpillar dealer.

² Generator temperature rise is based on a 40° C (104° F) ambient per NEMA MG1-32.

³ Emissions data measurement is consistent with those described in EPA CFR40 Part 89, Subpart D and ISO8178-1 for measuring HC, CO, PM, NOx. Data shown is based on steady state operating conditions of 77° F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 btu/lb.

PRIME 580 ekW 725 kVA

50 Hz 1500 rpm 400 Volts



RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: AS1359, AS2789, CSA, EGSA101P, IEC60034, ISO3046, ISO8528, NEMA MG 1-32, UL508, 72/23/EEC, 89/336/EEC, 98/37/EEC.

Prime - Output available with varying load for an unlimited time. Prime power in accordance with ISO8528. 10% overload power in accordance with ISO3046, AS2789, and BS5514. Prime ambient temperatures shown indicate a coolant top tank temperature just below shutdown at 100 percent load.

Ratings are based on SAE J1995 standard conditions.

These ratings also apply at ISO3046 standard conditions.

Fuel Rates are based on fuel oil of 35° API (16° C or 60° F) gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal).

Additional Ratings may be available for specific customer requirements. Consult your Caterpillar representative for details.

PRIME 580 ekW 725 kVA

50 Hz 1500 rpm 400 Volts



DIMENSIONS

Package Dimensions		
Length	4485.0 mm	176.57 in
Width	1798.1 mm	70.79 in
Height	1986.7 mm	78.22 in
Weight	7081 kg	15,611 lb

Note: Do not use for installation design.
See general dimension drawings for
detail (Drawing #2923106).

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Performance No.: DM0627

Feature Code:: 412DEQ9

Source:: European Sourced

5 April 2007

9480029

Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.

CAT, CATERPILLAR, their respective logos, "Caterpillar Yellow," and the
POWER EDGE trade dress, as well as corporate and product identity used
herein, are trademarks of Caterpillar and may not be used without
permission.

Price
FOR 400 TPD VSK CEMENT PLANT
- Belt Conveyor Layout-
(1 RM with Classifier, 4 x 100 TPD VSK and 1 CM with Classifier)

Section	Description of sections	US\$-FOB Indian port
1	Crushing section	510,000
2	Raw material handling & raw mill section	2,498,000
3	Blending & Storage section	241,000
4	VSK Section	2,958,000
5	Cement mill & Storage section	2,345,000
6	Packing section	520,000
7	Engineering services towards preparation and submission of Mechanical data drawings, Civil construction drawings, Electrical Single Line Diagram	281,000
8	Electricals consisting: Sub-station & Transformer MCC with PLC LRS & Cables	1,568,000
9	Laboratory equipment	37,000
10	Supervision of erection & commissioning	375,000
	Under MIPL Scope of supply	<u>11,333,000</u>
	(US\$ Eleven Million Three hundred and thirty three only)	
✓ 11	Laboratory equipment (X-Ray Analyzer)	121,000
✓ 12	Civil construction cost (approx.)	3,400,000
✓ 13	Freight & Insurance (approx.)	850,000
✓ 14	Workshop equipment	134,000
✓ 15	Quarry equipment (optional)	431,000
✓ 16	Weigh bridge	42,000
	To be arranged by customer	<u>4,978,000</u>

OTHERS TO BE CONSIDERED BY CUSTOMER:

- a Preliminary / pre-operative expenses
- b Land & Land development
- c Interest & financial expenses during construction and start up
- d Plant insurance
- e Start up expenses
- f Working capital requirements
- g Liasoning expenses
- h Erection tools & tackles
- j Local erection expenses
- k Spares
- m Miscellaneous assets such as office furniture, phones, vehicles etc.

Please refer to our terms and conditions attached to this offer.

for MOVERS (INDIA) PRIVATE LIMITED

T S Rajamani
Managing Director

Technical Specifications

400 TONES/DAY VSK CEMENT PLANT

1 Raw mill with classifier, 4 x 100 TPD VS Kilns, 1 cement mill with classifier

Please read this specification in conjunction with our flow Sheet #13-0702-01

Note: Client shall provide 3 Nos of front end loaders (1 No. for raw material storage yard, 1 No. for clinker storage yard and 1 No. as standby) (By Client)

1.00 CRUSHING SECTION

Raw materials required/week	:	3780 tones
Crusher operating hours/week	:	54 hours
Capacity of crushing section	:	70 tph

It is assumed that Limestone is brought from quarry in sizes less than 300 mm and stored in an open storage area.

1.01 Service Hopper

(Scope : By Client)

Quantity	:	1 no.
Material handled	:	Uncrushed Limestone
Lump size	:	Below 300 mm
Capacity	:	50 cu.m ~
Bottom opening	:	900 x 1200 mm
Construction	:	RCC Construction By Client

1.02 Vertical Chain Gate

Quantity	:	1 no.
Location : at discharge end	:	Of service hopper
Service	:	To regulate material bed
Material handled	:	Uncrushed Limestone
Size	:	1000 mm wide x 1100 mm ht
Construction	:	MS fabricated with chains attached

1.03 Apron Feeder

Quantity	:	1 no.
Location At discharge of	:	RCC Hopper
Material handled	:	Uncrushed Limestone
Lump size	:	Below 300 mm
Apron width	:	1000 mm
Conveyor length	:	10 m
Capacity	:	70 TPH
Apron material	:	Cast steel
Chain speed	:	6 m / min
Take - up	:	STU
Drive Details	:	
Motor	:	15 hp, 1000 rpm with VFD, TEFC SC
Gearbox	:	Helical, To suit
Couplings	:	Included

1.04 Primary Jaw Crusher

Quantity	:	1 no.
Material handled	:	Uncrushed Limestone
Lump size	:	Below 300 mm
Hardness of Limestone	:	3 on Moh's scale
Capacity	:	70 tph
Size : approx.	:	900 x 600 mm
Product size	:	Below 85 mm
Body	:	MS fabricated
Pitman	:	Cast steel, IS : 1030
Jaw plates	:	Mn. steel, IS : 276, Gr.3
Type	:	Double toggle
Drive Details	:	
Motor	:	100 hp, 1000 rpm TEFC SC
V-Pulleys & belts	:	to suit

1.05 Inclined Belt Conveyor

Quantity	:	1 no.
Material handled	:	Crushed Limestone
Lump size	:	Below 85 mm
Capacity	:	70 tph
Belt width	:	800 mm
Flat/troughed	:	Troughed
Length of conveyor c/c	:	25 m (approx.)
Inclination	:	16 deg.
Carrying Idlers	:	spaced at 1250mm
Return Idlers	:	spaced at 2500mm
Impact idlers	:	4 nos.
SACI	:	3 nos.
SARI	:	1 no.
Head pulley	:	Dia.400 mm
Tail pulley	:	Dia.350 mm
Take-up	:	Screw Take-up
External scraper	:	1 no.
Internal scraper	:	1 no.
Skirtboards	:	2 m length at inlet
Deck plate	:	At Feed point provided
Short support (1m height)	:	Provided
Drive Details	:	
Motor	:	10 hp, 1500 rpm, TEFC SC
Gearbox	:	Worm 8", 40/1
Couplings	:	To suit
Belting: Type	:	Nylon 315/3
Grade	:	M24
Cover thk.	:	3/1.5 mm
Total length	:	55 m

1.06 Secondary Impactor

Quantity	:	1 no.
Material handled	:	Crushed Limestone
Lump size	:	Below 85 mm
Hardness of Limestone	:	3 on Moh's scale
Product size	:	Below 20 mm
Type	:	Reversible Impactor
Capacity	:	70 tph
Size	:	1000x1200 mm
Body	:	MS fabricated
Shaft	:	C40, Forged steel
Bearings	:	Anti-friction bearings
Hammer discs	:	Cast steel, IS : 1030 / BS 592
Hammers	:	Mn. steel, IS : 276 / BS 1457
Drive Details	:	
Motor	:	150 hp, 1500 rpm TEFC SC
V-Pulley & belts	:	To suit

1.07 Bag Filter

Quantity	:	1 no.
Location	:	In crushing house
Service	:	To dedust impactor
Gas temperature	:	45 deg.C
Dust loading	:	50 gms/m ³
Type	:	Reverse jet
Capacity	:	200 m ³ /min
Geared Motor	:	0.5 HP

1.07a Compressor

Capacity	:	30 cu.m/hr
Pressure	:	7 kg/cm ²
Motor	:	7.5 HP, 1500 rpm TEFC SC

1.07b Vent fan for Bag filter

Quantity	:	1 no.
Location	:	After Bag filter
Service	:	To vent cleaned gas
Type	:	Centrifugal
Gas volume	:	220 m ³ /min
Temperature	:	45deg.C
Pressure	:	200 mm WG.
Motor	:	15 hp, 1500 rpm, TEFC SC
V-Pulleys & belts	:	To suit

1.08 Inclined Belt Conveyor

Quantity	:	1 no.
Material handled	:	Crushed Limestone
Lump size	:	< 20 mm
Capacity	:	70 TPH
Belt width	:	650 mm
Flat/troughed	:	Troughed

Length of conveyor c/c	:	41 m (approx.)
Inclination	:	17 degrees
Carrying Idlers	:	spaced at 1250mm
Return Idlers	:	spaced at 2500mm
Impact idlers	:	4 nos.
Take-up	:	Screw Take up
Head pulley	:	Dia.400 mm
Tail pulley & Take-up pulley	:	Dia.350 mm
Snub pulley & Bend pulley	:	Dia.300 mm
External scraper	:	1 no.
Internal scraper	:	1 no.
Skirt boards	:	Provided at Inlet
Deck plate	:	Provided at Inlet
Short support (1m height)	:	Provided
Drive Details	:	
Motor	:	12.5 hp, 1500 rpm
Gear Box	:	Worm 9", 30/1 ratio
Couplings	:	To suit
Belting	:	
Width	:	650 mm
Type	:	Nylon 315/3
Grade	:	M24
Cover thk.	:	3/1.5 mm
Total length	:	90 m

1.09 Horizontal Belt Conveyor with traveling tripper

Quantity	:	1 no.
Material handled	:	Crushed Limestone
Lump size	:	< 20 mm
Capacity	:	70 tph
Belt width	:	650 mm
Flat/troughed	:	Troughed
Length of conveyor c/c	:	41 m (approx.)
Carrying Idlers	:	spaced at 1250mm
Return Idlers	:	spaced at 2500mm
Impact idlers	:	4 nos.
Head pulley	:	Dia.400 mm
Tail pulley	:	Dia.350 mm
Take-up	:	Screw take up
External scraper	:	1 no.
Internal scraper	:	1 no.
Skirt boards	:	Provided at inlet
Deck plate	:	Provided at inlet
Short support (1m height)	:	Provided
Drive Details	:	
Motor	:	10 hp, 1500 rpm, TEFC SC
Gear Box	:	Worm 8", 30/1
Couplings	:	To suit
Tripper Motor	:	5 hp, 1500 rpm, TEFC SC
Tripper Gearbox	:	Worm 5", 30/1
Tripper Couplings	:	To suit

Belting	:	
Width	:	650 mm
Type	:	Nylon 315/3
Grade	:	M24
Cover thk.	:	3/1.5 mm
Total length	:	92 m

1.10 Chutes for the section

Quantity	:	1 set
Service: for material discharge	:	for equipment in the section
Construction	:	MS Fabricated

2.00 RAW MATERIAL STORAGE SECTION

Storage Yard (Pile Capacity)

Limestone stock recommended	:	4600 tones
Clay stock recommended	:	2500 tones
Additive stock recommended	:	750 tones
Coke breeze stock recommended	:	1000 tones

Note : Client has to arrange for Dry Raw Material with 4% Maximum Moisture content for

2.01 Steel Hoppers

Quantity	:	5 Nos.
Location	:	In storage yard
Material handled	:	Limestone/Clay/Coke breeze/Additive
Size	:	1500x1500x750
Construction	:	MS Fabricated

2.02 Slide Gates

Quantity	:	3 nos.
Location: at the discharge of	:	Below Limestone bins- 2 nos.
	:	Below Clay bin- 1 no.
Type	:	Screw with wheel
Size	:	545x545 mm
Operation	:	Manual
Construction	:	MS Fabricated

2.03 Slide Gates

Quantity	:	2 nos.
Location: at the discharge of	:	Below Coke breeze & Additive bins
Type	:	Screw with wheel
Size	:	350x350 mm
Operation	:	Manual
Construction	:	MS fabricated

2.04 Weigh Feeders

Quantity	:	2 nos.
Location: at discharge of	:	Slide gate
Material handled	:	Limestone
Lump size	:	Below 20 mm
Feed rate	:	5-50 tph
Type	:	Electronic, Load cell type
Belt width	:	800 mm
Feeder length	:	2000 mm
Operating range	:	1:10
Electronic controls	:	Provided
Control panel	:	Provided
Accuracy	:	Plus/minus 0.5% of set rate
Drive details	:	
Motor	:	2 hp, 720 rpm with VFD
Gearbox	:	25/1 ratio
Couplings	:	to suit

2.05 Weigh Feeders

Quantity	:	2 nos.
Location: at discharge of	:	Slide gate
Material handled	:	Clay/Coke Breeze
Lump size	:	Clay : <20 mm
Feed rate	:	1-10 tph
Type	:	Electronic, Load cell type
Belt width	:	800 mm
Feeder length	:	2000 mm
Operating range	:	1:10
Electronic controls	:	Provided
Control panel	:	Provided
Accuracy	:	Plus/minus 0.5% of set rate
Drive details	:	
Motor	:	1 hp, 720 rpm with VFD
Gearbox	:	70/1 ratio
Couplings	:	to suit

2.06 Additive Weigh feeder

Quantity	:	1 No.
Location: at discharge of	:	Slide gate
Material handled	:	Additive
Lump size	:	Below 20 mm
Feed rate	:	0.5-5 tph
Type	:	Electronic, Load cell type
Belt width	:	800 mm
Feeder length	:	2000 mm
Operating range	:	1:10
Electronic controls	:	Provided
Control panel	:	Provided
Accuracy	:	Plus/minus 0.5% of set rate

Drive details		
Motor	:	1 hp, 720 rpm with VFD
Gearbox	:	70/1 ratio
Couplings	:	to suit
2.07 Horizontal Belt Conveyor		
Quantity	:	1 no.
Service	:	to convey material to Bucket elevator
Location: at discharge of	:	Weigh Feeders
Material handled	:	Limestone/Clay/Coke Breeze/Additive
Lump size	:	< 20 mm
Capacity	:	50 tph
Belt width	:	650 mm
Conveyor length	:	93 m c/c
Inclination	:	15 deg at discharge end.
Carrying idler spacing	:	1250 mm ~
Return idler spacing	:	2500 mm ~
Impact idlers	:	28 nos.
Head pulley	:	Ø 400
Tail pulley	:	Ø 350
Takeup	:	Horizontal Gravity Take up
Deck plate	:	provided at inlet
Base frame & foundation bolts	:	Provided
Drive details		
Belting: Width	:	650 mm
Rating	:	315/3
Grade	:	M 24
Top/bottom cover	:	3/1.5 mm
Total length	:	195 m
Motor	:	7.5 hp, 1500 rpm
Gearbox	:	6", 30/1 ratio
Couplings	:	to suit
2.08 Bag Filter for Tunnel venting		
Quantity	:	1 no.
Service	:	to dedust tunnel
Location	:	Near Tunnel
Material handled	:	Limestone powder
Capacity	:	200 cu.m/min
Dust loading	:	50 gms/cu.m
Temperature	:	Ambient
Rotary feeder motor	:	0.5 hp (Geared motor)
Supporting structure	:	included
Foundation bolts	:	included
2.08a Vent Fan for Bag Filter		
Quantity	:	1 no.
Service	:	to vent clean air from Bag Filter
Location	:	After bag Filter
Capacity	:	220 cu.m/min
Pressure	:	250 mm WG
Suction valve	:	manually operated Butterfly valve
Motor	:	20 hp, 1500 rpm

2.08b Compressor

Quantity	:	1 no.
Service	:	For Bag Filter Purging
Capacity	:	30 cu m / hr @ 7 kg / cm ² Pressure
Motor	:	7.5 HP, 1500 rpm TEFC SC
Pulleys & V Belts	:	To suit

2.09 Bucket Elevator

Quantity	:	1 no.
Location	:	Discharge of Horizontal Belt Conveyor
Service	:	To elevate material
Material handled	:	Raw mix
Bulk density	:	1.4 t/m ³
Type	:	Centrifugal - Belt type
Capacity	:	50 tph
Belt speed	:	1.32 m/s
Bucket: Size	:	410 x 200 x 215 mm dp
Capacity	:	9.6 litres
Spacing	:	460 mm
Size: Casing	:	1400 x 560 mm
Height	:	25 m c/c
Head Pulley size	:	dia 760 mm
Intermediate casing	:	3 mm MS sheet fabricated
Top casing	:	6 mm MS sheet fabricated
Bottom casing	:	8 mm MS sheet fabricated
Shafts	:	C 45 steel
Pulleys	:	MS Fabricated
Buckets	:	3 mm MS sheet fabricated
Base frame & Foundation bolts	:	included
Drive details	:	
Elevator Belt details	:	
Width	:	450 mm
Type	:	Nylon - Elevator belting
Cover thickness	:	To suit
Total length	:	55 mts (approx)
Motor	:	20 hp, 1000 rpm, TEFC SC
Worm reducer	:	10", 30/1 ratio, with hold-back
Couplings	:	to suit

2.10 Chutes and ductings

Quantity	:	1 set
Service	:	for equipment in the section
Construction	:	MS Fabricated

3.00 RAW MILL SECTION

3.01 Surge Hopper

Quantity	:	1 no.
Location	:	Above Raw mill
Service	:	To hold temporary stock
Material handled	:	Crushed raw mix
Capacity	:	20 cu. m
No. of outlets	:	One
Construction	:	MS Fabricated

3.02 Level Indicator

Quantity	:	1 no.
Type	:	Ultrasonic
Duty	:	Continuous

3.03 Slide Gate

Quantity	:	1 No.
Location: at the discharge of	:	Below hopper
Type	:	Screw with wheel
Size	:	545x545 mm
Operation	:	Manual
Construction	:	MS Fabricated

3.04 Weigh Feeder

Quantity	:	1 no.
Location: at discharge of	:	Slide gate
Material handled	:	Raw mix
Lump size	:	Below 20 mm
Feed rate	:	5-50 tph
Type	:	Electronic, Load cell type
Belt width	:	800 mm
Feeder length	:	2000 mm
Operating range	:	1:10
Electronic controls	:	Provided
Control panel	:	Provided
Accuracy	:	Plus/minus 0.5% of set rate
Drive details	:	
Motor	:	2 hp, 720 rpm with VFD
Gearbox	:	25/1 ratio
Couplings	:	to suit

3.05 Raw Mill

Quantity	:	1 no.
Material handled	:	Raw mix
Feed size	:	< 20 mm
Bond's index	:	11 (dry)
Moisture	:	4% (max)
Type of mill	:	Closed circuit
Capacity	:	45 tph
Product fineness	:	13% retained on 170 mesh
Size of mill	:	Dia.2.8 x Lg.9.6 m
No. of compartments	:	Two
Grinding media required	:	70 tones (max)

Mill Construction	:	
Shell	:	Mild steel, IS:2002, Gr. 2A 32 mm Thk
Flange	:	Mild steel, IS:226
Trunions / Header	:	CS, IS:1030, Gr.27-54
Girth gear	:	CS, IS:2708,Gr.3A
Pinion	:	EN 24, Forged steel (BS 970)
Liner plate thk	:	35 - 90mm
Trunion journal bearing:	:	CS, IS 1030 Gr. 27-54
	:	Lined with Lead based White Metal
Pinion shaft	:	C40, forged steel
Pinion shaft brgs	:	Anti-friction roller bearings
Liner plates	:	Mn. Steel, IS 276, Gr 3
Diaphragm Liner	:	Mn Steel, IS 276, Gr 3
Diaphragm	:	Double type
Drive details	:	
Grinding Media	:	70 tons, Hyper steel
	:	(IS:6079, 375 BHN)
Main motor	:	1250 hp, 1000 rpm TEFC Slip Ring (HT)
Main gearbox	:	7.1:1 ratio, Helical, To Suit
Gearbox Lubrication System with pump	}	Included
Flexible coupling	:	to suit
Gear coupling	:	to suit
Inching Motor	:	20 hp, 1000 rpm TEFC SC
Inching Gearbox	:	Helical to suit, 70/1 ratio
Torsion shaft	:	Included
Jaw coupling	:	to suit
Flexible coupling	:	to suit
Lubrication for main bearings with Mill Pre-jacking system	}	Forced Lubrication system with pump – 2 Nos
Girth gear lubrication system	:	Included

3.06 Double Flap Valve

Quantity	:	1 No.
Location at discharge of	:	Raw Mill
Material handled	:	Raw mix powder
Capacity	:	650 mm square
Construction	:	MS fabricated

3.07 Bag Filter for Mill

Quantity	:	1 no.
Service	:	to dedust Raw Mill
Location	:	Near Raw mill
Material handled	:	Raw mix powder
Capacity	:	350 cu.m / min
Dust loading	:	50 gms / cu.m
Temperature	:	90 deg C
Rotary Feeder motor	:	0.5 hp, (Geared motor)
Supporting structure	:	included
Foundation bolts	:	included

3.07a Vent Fan

Quantity	:	1 no.
Service	:	to vent clean air from Bag Filter
Location	:	After bag Filter
Capacity	:	390 cu.m/min
Pressure	:	250 mm WG
Suction valve	:	Manually operated butterfly valve
Motor	:	40 hp, 1500 rpm

3.07b Compressor

Quantity	:	1 no.
Service	:	For Bag Filter Purging
Capacity	:	40 cu m / hr @ 7 kg / cm ² Pressure
Motor	:	10 HP, 1500 rpm TEFC SC
Pulleys & V Belts	:	To suit

3.08 Pipe Screw Conveyor

Quantity	:	1 No.
Location	:	At Raw Mill discharge
Purpose	:	Raw mix powder to Classifier circuit
Material handled	:	Raw Meal Powder
Capacity	:	115 tph
Type	:	O-Type
Screw Dia	:	450 mm
Screw Pitch	:	315 mm
Length	:	6 mts
Material of Construction	:	
Flights	:	5 mm plate
End plates	:	8 mm plate
Bearings	:	Anti-friction brgs
Base frame & Foundation bolts	:	Included
Drive details	:	
Motor	:	30 hp, 1500 rpm, TEFC SC
Gearbox	:	10", 25/1 ratio
Couplings	:	To suit

3.09 Bucket Elevator

Quantity	:	1 no.
Location	:	Discharge of Pipe Screw Conveyor
Service	:	To elevate material
Material handled	:	Raw Meal Powder
Bulk density	:	1.1 t/m ³
Type	:	Centrifugal – Belt type
Capacity	:	115 tph
Belt speed	:	1.25 m/s
Bucket: Size	:	610 x 255 x 270 mm depth
Capacity	:	22.5 litres
Spacing	:	600 mm
Size: Casing	:	1800 x 800 mm
Height	:	25 m c/c
Head Pulley size	:	dia 960 mm
Intermediate casing	:	3 mm MS sheet fabricated

Top casing	:	6 mm MS sheet fabricated
Bottom casing	:	8 mm MS sheet fabricated
Shafts	:	C 45 steel
Pulleys	:	MS Fabricated
Buckets	:	3 mm MS sheet fabricated
Base frame & Foundation bolts	:	included
Drive details	:	
Elevator Belt details	:	
Width	:	650 mm
Type	:	Steel Cord
Total length	:	55 mts (approx)
Motor	:	40 hp, 1000 rpm, TEFC SC
Gear Box	:	Helical, 40/1 ratio, with hold-back
Couplings	:	to suit

3.10 Mechanical Classifier

Quantity	:	1 no.
Location	:	In mill circuit
Service	:	To segregate fines
Material handled	:	Mill output
Input capacity	:	120 tph
Size of classifier	:	Dia.4800 mm
Construction	:	
Body	:	MS fabricated
Shaft	:	C40 forged steel
Blades	:	MS plate with lining
Base frame & Foundation bolts	:	included
Bearings	:	Anti-friction roller brgs.
Drive details	:	
Motor (Vertical)	:	125 hp, 720 rpm (VFD)
Pulleys & V Belts	:	To suit

3.11 Double Flap Valve

Quantity	:	1 No.
Location at discharge of	:	Classifier Grit Side
Material handled	:	Raw mix Grits
Capacity	:	400 mm square
Construction	:	MS fabricated

3.12 Rotary Air lock

Quantity	:	1 no.
Location: at discharge of	:	Classifier Fines discharge
Material Handled	:	Raw Mix powder
Rotary valve diameter	:	400 mm
Capacity	:	50 TPH
Construction	:	
Body	:	MS
Blades	:	MS
Shaft	:	En 8 / C 40
Bearings	:	Ball Bearings
Bearing Housing	:	MS

Feed & Discharge Chutes	:	MS
Drive details	:	
Geared motor	:	5 hp, 20 rpm, TEFC SC
Sprocket & chains	:	To suit
3.13 Solids Flow Meter		
Quantity	:	1 No.
Location : at discharge of	:	Double Flap valve
Purpose	:	For Grits Weighing
Material handled	:	Raw mix Grits
3.14 Grit Air slide		
Quantity	:	1 no.
Location: at discharge of	:	Classifier grit outlet
Material handled	:	Raw mix grits
Capacity	:	70 tph
Size	:	330 mm
Length	:	16 m approx
Airslide Cloth	Type :	Silicon Treated
Drive details	:	
Motor	:	5 hp, 3000 rpm TEFC SC
Fan Capacity	:	15 m3/min @ 500mm WG
3.15 Product Air Slide		
Quantity	:	1 no.
Location: at discharge of	:	Classifier fines outlet
Material handled	:	Raw mix fines
Capacity	:	50 tph
Size	:	330 mm
Length	:	16 m approx
Airslide Cloth	Type :	Silicon Treated
Drive details	:	
Motor	:	5 hp, 3000 rpm TEFC SC
Fan Capacity	:	15 m3/min @ 500mm WG
3.16 Airlift with Expansion Chamber		
Quantity	:	1 no.
Location : at discharge of	:	Product Airslide
Material handled	:	Raw mix fines
Capacity	:	50 tph
Diameter of vessel	:	1200 mm
Height of vessel	:	4000 mm
Max. Lift	:	45 m
Construction	:	
Vessel	:	MS fabricated
Expansion chamber	:	MS fabricated
Supporting frame	:	MS fabricated
Cloth	:	Silicon treated
Chutes	:	MS fabricated
Base frame	:	MS fabricated
Pipe line	:	ERW
Base frame & Foundation bolts	:	included

3.16A Roots blower for airlift

Quantity	:	1 No.
Capacity	:	50 m ³ /min
Pressure	:	5.5 m WG
Motor	:	100 HP, 1500 rpm, TEFC SC
V_Pulleys & V Belts	:	To suit
Non-return valve	:	Provided
Pressure valve	:	Provided
Pressure gauge	:	Provided

3.17 Screw conveyor

Quantity	:	1 no.
Location: at discharge of	:	Airlift outlet
Material handled	:	Raw mix fines
Capacity	:	50 tph
Type	:	U-Type
Screw dia.	:	500 mm
Screw pitch	:	500 mm
Conveyor length	:	10 m c/c
Construction	:	
Flights	:	5 mm plate
Trough	:	5 mm plate
Cover	:	3 mm plate
End plates	:	8 mm plate
Bearings	:	Anti-friction brgs
Base frame & Foundation bolts	:	included
Drive details	:	
Motor	:	10 hp, 1500 rpm, TEFC SC
Gearbox	:	8", 40/1 ratio
Couplings	:	To suit

3.18 Rotary cut-off valves with actuators

Quantity	:	2 nos.
Location: at discharge of	:	at Blending silo top
Service	:	To isolate Blending silos
Material handled	:	Raw mix fines
Size of valve : Dia.	:	400 mm
Construction	:	
Body	:	MS fabricated
Valve	:	MS fabricated
Bearings	:	Ball Bearings
Actuator Motor	:	2 hp

3.19 Chutes and ductings for the above section

Quantity	:	1 set
Service	:	for equipment in the section
Construction	:	MS Fabricated

4.00 BLENDING AND RAW MEAL STORAGE SECTION

Capacity of each Blending silo	:	175	tones
Capacity of each storage silo	:	2200	tones

4.01 RCC Blending Silos : **(SCOPE : BY CLIENT)**

Quantity	:	2 nos.
Location	:	after Raw mill house
Material handled	:	Raw mix fines
Capacity	:	175 cu.m (each)
Silo inside diameter	:	5 m
Silo inside height	:	10 m
Construction	:	In RCC

4.02 Level Indicator

Quantity	:	2 nos.
Type	:	Electro-Mechanical
Duty	:	Continuous

4.03 Aeration pads

Quantity	:	2 sets
Location	:	in Blending silos
Material handled	:	Raw mix fines
Air distribution valves	:	1 set of Solenoid Operated valves For each Blending silo considered
Construction	:	
Pads	:	MS fabricated
Cloth	:	Silicon treated cloth
Piping & Valves	:	included

4.03A HP Roots blower

Quantity	:	1 no.
Service	:	for blending
Capacity	:	30 m ³ /min
Pressure	:	9 m WG
Motor	:	100 hp, 1500 rpm , TEFC SC
Pulleys & V-Belts	:	To suit

4.03B LP Roots blower

Quantity	:	1 no.
Service	:	for blending
Capacity	:	30 m ³ /min
Pressure	:	5 m WG
Motor	:	50 hp, 1500 rpm, TEFC SC
Pulleys & V-Belts	:	To suit

4.04 Rotary Cut-off Valves with Actuators

Quantity	:	2 nos.
Location: at discharge of	:	Blending silos
Material handled	:	Raw mix fines
Size of valve : Dia.	:	400 mm

Construction	:	
Body	:	MS fabricated
Valve	:	MS fabricated
Bearings	:	Ball Bearings
Operation	:	Manual
Actuator Motors	:	2 hp
4.05 RCC Storage Silo	:	(SCOPE : BY CLIENT)
Quantity	:	1 no.
Location	:	Below Blending Silos
Service	:	To hold raw meal stock
Type	:	Flat bottom
Capacity	:	2200 tons
Size	:	Dia. 12 x ht. 20 m
Construction	:	In RCC
4.05A Level Indicator	:	
Quantity	:	1 nos.
Type	:	Electro-Mechanical
Duty	:	Continuous
4.06 Aeration Pads for silo	:	
Quantity	:	1 set
Location : at bottom of	:	Silo
Service	:	To fluidise material
Pads : Body	:	MS fabricated
Cloth	:	Silicon treated
Piping & valves	:	Included
4.06A Emptying Roots Blower	:	
Quantity	:	1 no.
Service	:	for emptying
Capacity	:	22 cu. m/min
Pressure	:	5 m WG
Motor	:	40 hp, 1500 rpm TEFC SC
Pulleys & V-Belts	:	To suit
4.07 Bag Filter for dedusting	:	
Quantity	:	1 no.
Location	:	On top of storage silo
Service	:	To dedust Silo
Gas temperature	:	45 deg. C
Dust loading	:	50 gms/m ³
Type	:	Reverse jet
Capacity	:	200 m ³ /min
Rotary feeder drive	:	0.5 hp (Geared Motor)
Supporting structure	:	included

4.07a Vent Fan

Quantity	:	1 no.
Service	:	to vent clean air from Bag Filter
Location	:	After bag Filter
Capacity	:	220 cu.m /min
Pressure	:	200 mm WG
Suction valve	:	Manually operated Butterfly valve
Motor	:	20 hp, 1500 rpm, TEFC SC
V-pulley drive	:	to suit

4.07b Compressor

Quantity	:	1 no.
Service	:	For Bag Filter Purging
Capacity	:	30 cu m / hr @ 7 kg / cm ² Pressure
Motor	:	7.5 HP, 1500 rpm TEFC SC
Pulleys & V Belts	:	To suit

4.08 Chutes and ductings for the above section

Quantity	:	1 set
Service	:	for equipment in the section
Construction	:	MS Fabricated

5.00 VSK Section**5.01 Rotary cut-off valves**

Quantity	:	2 Nos.
Location: at discharge of	:	Raw meal storage silo
Service	:	To isolate silo
Material handled	:	Raw mix fines
Size of valve: Dia.	:	400 mm
Construction	:	
Body	:	MS fabricated
Valve	:	MS fabricated
Bearings	:	Ball Bearings

5.02 Fluidized Discharge Box

Quantity	:	2 nos.
Location: at discharge of	:	Rotary Cut-off Valve
Service	:	To fluidize material
Material handled	:	Raw meal for kiln
Capacity	:	20 tph
Size	:	400x1430 mm
Construction	:	
Body	:	MS Fabricated
Cloth	:	Silicon treated

5.03 Airslide

Quantity	:	2 nos.
Location: at discharge of	:	Fluidised Discharge box
Service	:	to convey material to Airlift
Material handled	:	Raw meal
Capacity	:	20 tph
Size	:	330 mm
Length of conveyor	:	15 m

5.03A Fan for Airslide

Quantity	:	2 nos.
Service	:	for airslide
Capacity	:	15 cu.m/min
Pressure	:	500 mm WG
Temperature	:	Ambient
Motor	:	5 hp, 3000 rpm
Base frame	:	Included
Foundation bolts	:	Included

5.04 Airlift with Expansion Chamber

Quantity	:	2 nos.
Location : at discharge of	:	Airslides
Material handled	:	Raw mix fines
Capacity	:	20 tph
Diameter of vessel	:	1200 mm
Height of vessel	:	4000 mm
Max. Lift	:	35 m
Construction	:	
Vessel	:	MS fabricated
Expansion chamber	:	MS fabricated
Supporting frame	:	MS fabricated
Cloth	:	Silicon treated
Chutes	:	MS fabricated
Base frame	:	MS fabricated
Base frame & Foundation bolts	:	included
Pipe line	:	ERW

5.04A Roots Blower

Quantity	:	2 nos.
Capacity	:	20 m3/min
Pressure	:	5 m WG
Motor	:	50 HP, 1500 rpm, TEFC SC
V_Pulleys	:	To suit
V_Belts	:	To suit
Non-return valve	:	Provided
Pressure valve	:	Provided
Pressure gauge	:	Provided

5.05 Screw Conveyor

Quantity	:	2 nos.
Location: at discharge of	:	Airlift Expansion Chamber
Material handled	:	Raw meal powder
Capacity	:	20 tph
Type	:	U-Type
Screw dia.	:	400 mm
Screw pitch	:	400 mm
Conveyor length	:	16 m c/c
Construction	:	
Flights	:	5 mm plate
Trough	:	5 mm plate
Cover	:	3 mm plate
End plates	:	8 mm plate
Bearings	:	Anti-friction brgs
Base frame & Foundation bolts	:	included
Drive details	:	
Motor	:	10 hp, 1500 rpm, TEFC SC
Gearbox	:	8", 40/1 ratio
Couplings	:	To suit

5.06 Overflow Screw Conveyor-1

Quantity	:	2 nos.
Location: at discharge of	:	Feed Screw Conveyors
: Feeding to	:	Silo
Material handled	:	Raw Meal Powder (Overflow)
Capacity	:	20 tph
Type	:	U-Type
Screw dia.	:	400 mm
Screw pitch	:	400 mm
Conveyor length	:	16 m c/c (approx)
Construction	:	
Flights	:	5 mm plate
Trough	:	5 mm plate
Cover	:	3 mm plate
End plates	:	8 mm plate
Bearings	:	Anti-friction brgs
Base frame & Foundation bolts	:	included
Drive details	:	
Motor	:	10 hp, 1500 rpm, TEFC SC
Gearbox	:	8", 40/1 ratio
Couplings	:	To suit

5.07 Overflow Screw Conveyor-2 (Silo Feeding)

Quantity	:	2 nos.
Location: at discharge of	:	Overflow Screw Conveyors-1
Material handled	:	Raw Meal Powder (Overflow)
Capacity	:	20 tph
Type	:	U-Type
Screw dia.	:	400 mm
Screw pitch	:	400 mm

Conveyor length	:	6 m c/c (approx)
Construction	:	
Flights	:	5 mm plate
Trough	:	5 mm plate
Cover	:	3 mm plate
End plates	:	8 mm plate
Bearings	:	Anti-friction brgs
Base frame & Foundation bolts	:	included
Drive details	:	
Motor	:	5 hp, 1500 rpm, TEFC SC
Gearbox	:	6", 40/1 ratio
Couplings	:	To suit
5.08 Noduliser Hopper		
Quantity	:	4 nos.
Location: at discharge of	:	Feed Screw Conveyor
Service	:	To hold raw meal
Capacity	:	15 t (approx.)
Construction	:	MS fabricated
5.09 Slide Gate		
Quantity	:	4 nos.
Location: at the discharge of	:	Below hopper
Type	:	Screw with wheel
Size	:	350x350 mm
Operation	:	Manual
Construction	:	MS Fabricated
5.10 Noduliser Weigh Feeders		
Quantity	:	4 nos.
Location: at discharge of	:	Slide Gates
Service	:	to precisely regulate feed to Noduliser
Capacity	:	10 tph each
Belt width	:	1000 mm
Conveyor length- c/c	:	2000 mm
Range	:	1:10
Accuracy	:	plus/minus 0.5 %
Motor	:	3 HP Geared Motor with VFD
5.11 Nodulisers		
Quantity	:	4 nos.
Location: at discharge of	:	Noduliser Weigh Feeders
Service	:	To nodulise raw meal
Type	:	Single collar
Capacity	:	10 tph each
Size: dia.	:	3000 mm
Inclination	:	30 to 60 degrees
Speed Range	:	15 to 19 rpm
Nodule size	:	8 to 12 mm
Moisture in Nodules	:	11 to 15%

Material of Construction	:	
Pan	:	Mild Steel
Shaft	:	EN 8/C 40
Collar	:	Mild Steel
Drive Base/Chute	:	Mild Steel
Drive details	:	For Each Noduliser
Main Motor	:	25 hp, 1500 rpm, TEFC SC
Gear box : Size	:	Worm, 14", 50:1 ratio
Coupling	:	To suit

5.12 Bag Filter for Noduliser

Quantity	:	2 nos.
Location	:	Near Noduliser
Service	:	To dedust Noduliser
Gas temperature	:	45 deg. C
Dust loading	:	100 gms/m ³
Type	:	Reverse jet
Capacity	:	200 m ³ /min
Rotary feeder drive	:	0.5 hp (Geared Motor)
Supporting structure	:	Included

5.12A Compressor for Bag Filter

Quantity	:	2 nos.
Service	:	for Bag Filter operation
Location	:	Near bag Filter
Capacity	:	30 cu. m/h
Pressure	:	7 kg/cm ²
Motor	:	7.5 hp, 1500 rpm

5.12B Vent fan for Bag Filter

Quantity	:	2 nos.
Service	:	to vent clean air from Bag Filter
Location	:	After bag Filter
Capacity	:	220 cu. m /min
Pressure	:	200 mm WG
Suction valve	:	manually operated Butterfly valve
Motor	:	15 hp, 1500 rpm
V-pulley drive	:	to suit

5.13 Screw Conveyor below Bag Filter

Quantity	:	2 nos.
Location: at discharge of	:	Bag Filters
Material handled	:	Raw meal powder
Capacity	:	5 tph
Type	:	U-Type
Screw dia.	:	315 mm
Screw pitch	:	315 mm
Conveyor length	:	9 m (approx.)

Construction	:	
Flights	:	5 mm plate
Trough	:	5 mm plate
Cover	:	3 mm plate
End plates	:	8 mm plate
Bearings	:	Anti-friction bearings
Base Frame	:	MS Fabricated
Drive details	:	
Motor	:	3 HP, 1440 rpm, TEFC SC
Gearbox	:	4", 40/1 ratio
Couplings	:	To suit

5.14 Vertical Shaft Kilns

Quantity	:	4 nos.
Location: at discharge of	:	Nodulisers
Service	:	To produce cement clinker
Feed material	:	Raw meal nodulised
Product	:	Cement clinker
Capacity	:	100 TPD of clinker
Fuel used	:	Coke breeze 5500 k cal/kg
Size : Inside Brick dia	:	2500 mm
Shell height	:	9000 mm
Type of grate	:	Conical Grate
Chimney - 2 nos. each kiln	:	Dia.1000 x 12000 mm
Wet Scrubber	:	Mounted on Chimney
Construction	:	
Body	:	MS Fabricated
Grate plate	:	Cast Steel IS 1030-Gr.27-54
King shaft	:	C40, forged steel
Bearing	:	Gun metal
VSK Secondary Gear box	:	To suit
Drive details	:	For each kiln
Grate motor	:	10 HP, 720 rpm (VFD)
Primary Gearbox	:	Worm (Shaft Mounted), 8", 30:1
Couplings	:	To suit
Rotary chute motor	:	3 hp, 1440 rpm, TEFC SC
Rotary chute gearbox	:	5", 60/1 ratio
Couplings	:	To suit
Bricks	:	
70% Alumina	:	350mm thk at burning zone
	:	200mm thk at discharge zone
55% Alumina	:	200/350mm thk. At cooling zone
35% Alumina	:	450mm thk. Insulation brick
Mortor	:	Included

5.15 Tripple Discharge Gate

Quantity	:	4 nos.
Location: at discharge of	:	VSK Grate
Construction	:	MS fabricated
Drive details	:	For each Gate
Motor	:	7.5 HP, 720 rpm TEFC SC
Gearbox	:	7", 40/1 ratio
Couplings	:	To suit

5.16 Belt Feeder with Weigher

Quantity	:	4 nos.
Capacity	:	6 Tonnes / hr
Location	:	At Discharge of Triple Discharge gate
Length	:	2.5 m
Belt Width	:	750 mm
Motor	:	2 HP, Geared Motor
Coupling	:	To suit
Belting	:	Grade SHR
Cover Thickness	:	Top 5 mm. Bottom 3 mm thk
Belt Weigher : Location	:	In Belt Feeders
Load Sensor	:	
Weighing Load Cell	:	Bonded Strain Gauge
Type	:	High precision Beam type
Gauge Resistance	:	350 Ohms
Excitation Voltage	:	10 V DC
Sensitivity	:	
Combined error	:	+0.5% of F.S
Speed Sensor	:	Digital Encoded AC Tacho
Input Voltage sensor	:	5-24 V / 12 V
Input Frequency range	:	5 Hz to 500 Hz

5.17 Bag Filter at Kiln Discharge

Quantity	:	2 nos.
Location: at discharge of	:	VS Kiln
Service	:	To dedust VSK discharge
Gas temperature	:	90 deg.C
Dust loading	:	50 gms/m ³
Type	:	Reverse jet
Capacity	:	200 m ³ /min
Rotary feeder drive	:	0.5 hp (Geared Motor)
Supporting structure	:	Included

5.17A Compressor for Bag Filter

Quantity	:	2 nos.
Service	:	for Bag Filter operation
Location	:	Near bag Filter
Capacity	:	40 cu.m/h
Pressure	:	7 kg/cm ²
Motor	:	10 hp, 1500 rpm

5.17B Vent fan for Bag Filter

Quantity	:	2 nos.
Service	:	to vent clean air from Bag Filter
Location	:	After bag Filter
Capacity	:	220 cu.m /min
Pressure	:	200 mm WG
Suction valve	:	Manually operated Butterfly valve
Motor	:	15 hp, 1500 rpm
V-pulley drive	:	to suit

5.18 Storage Hopper for Dust

Quantity	:	2 no.
Location	:	At Bag Filter Rotary Feeder Discharge
Service	:	To collect and store dust
Capacity	:	10 cu m
Material of Construction	:	MS Fabricated

5.18a Slide Gate

Quantity	:	2 nos.
Location: at the discharge of	:	Below Storage hopper
Type	:	Screw with wheel
Size	:	545 x 545 mm
Operation	:	Manual
Construction	:	MS Fabricated

5.19 Roots Blowers

Quantity	:	4 nos.
Capacity	:	12,500 cu.m/hr
Pressure	:	4 m WG
Motor	:	250 HP, 1500 rpm, TEFC SR
V_Pulleys	:	To suit
V_Belts	:	To suit
Non-return valve	:	Provided
Pressure valve	:	Provided
Pressure gauge	:	Provided

5.20 Horizontal cum Inclined Belt Conveyor (HR) -1

Quantity	:	2 nos.
Service	:	to convey material to crusher
Location	:	Below Belt Feeder with Weighers
Material handled	:	Clinker
Lump size	:	< 125 mm
Capacity	:	12 tph
Belt width	:	750 mm
Conveyor length	:	30 m c/c
Inclination	:	12 degrees
Carrying idler spacing	:	1250 mm ~
Return idler spacing	:	2500 mm ~
Impact idlers	:	8 Nos.
Head pulley	:	Ø 400
Tail pulley	:	Ø 350
Takeup	:	Screw type
Deck plate	:	Provided at inlet
Base frame & foundation bolts	:	provided
Drive details	:	for each Belt Conveyor
Belting: Width	:	750 mm (HR)
Rating	:	315/3
Grade	:	M 24
Top/bottom cover	:	3/1.5 mm
Total length	:	65 m
Motor	:	5 hp, 1500 rpm TEFC SC
Gearbox	:	5", 25/1
Couplings	:	to suit

5.21 Horizontal cum Inclined Belt Conveyor (HR) -2

Quantity	:	1 no.
Service	:	to convey material to Bucket Elevator feeding to Yard
Location	:	Below Belt Feeder with Weighers
Material handled	:	Clinker
Lump size	:	< 125 mm
Capacity	:	12 tph
Belt width	:	750 mm
Conveyor length	:	30 m c/c
Inclination	:	12 degrees
Carrying idler spacing	:	1250 mm ~
Return idler spacing	:	2500 mm ~
Impact idlers	:	16 Nos.
Head pulley	:	Ø 400
Tail pulley	:	Ø 350
Takeup	:	Screw type
Deck plate	:	Provided at inlet
Base frame & foundation bolts	:	provided
Drive details	:	
Belting: Width	:	750 mm (HR)
Rating	:	315/3
Grade	:	M 24
Top/bottom cover	:	3/1.5 mm
Total length	:	65 m
Motor	:	5 hp, 1500 rpm TEFC SC
Gearbox	:	5", 25/1
Couplings	:	to suit

5.22 Roller Crusher

Quantity	:	2 Nos.
Material handled	:	Uncrushed Clinker
Lump size	:	< 125 mm
Hardness of Clinker	:	3 on Moh's scale
Capacity	:	12 TPH
Size : Roller dia x length	:	650 x 600 mm
Product size	:	< 25 mm
Construction	:	
Body	:	MS fabricated
Roller	:	Mn. steel
Shaft	:	C40, forged steel
Bearings	:	Anti-friction bearings
Drive details	:	for each Crusher
Motor	:	20 hp, 1000 rpm - 2 Nos.
V-Pulleys & belts	:	To suit
Base frame & foundation bolts	:	Included

5.23 Bucket Elevator -1

Quantity	:	2 Nos.
Location	:	Discharge of Clinker Roll crushers
Feeding to	:	Belt conveyor
Material handled	:	Crushed Clinker
Type	:	Centrifugal - Chain type
Capacity	:	12 tph
Height	:	16 m (c/c)
Size : Casing	:	1250 x 400 mm
Bucket : Size	:	250x150xdp.160 mm
: Spacing	:	567 mm
: Capacity	:	3.4 litres
Head Sprocket size	:	pcd 630 mm
Chain speed	:	1.1 m/s
Take up	:	STU
Material of Construction	:	
Base frame for drive	:	included
Foundation bolts	:	included
Intermediate casing	:	3 mm MS sheet fabricated
Top casing	:	6 mm MS sheet fabricated
Bottom casing	:	8 mm MS sheet fabricated
Shafts	:	C 45 steel
Sprockets	:	Cast steel
Buckets	:	3 mm MS sheet fabricated
Drive details	:	for each Elevator
Motor	:	7.5 HP, 1000 rpm, TEFC SC
Worm reducer	:	8", 40:1 ratio with hold-back
Couplings	:	to suit
Elevator Chain details	:	
Type	:	Link Chain with U-Shackles
Diameter	:	to suit
Total length	:	66 mts (approx)

5.24 Bucket Elevator -2

Quantity	:	1 No.
Location	:	Discharge of Belt Conveyor -2
Feeding to	:	Clinker Storage Yard
Material handled	:	Clinker
Type	:	Centrifugal - Chain type
Capacity	:	12 tph
Height	:	12 m (c/c)
Size : Casing	:	1250 x 400 mm
Bucket : Size	:	250x150xdp.160 mm
: Spacing	:	567 mm
: Capacity	:	3.4 litres
Head Sprocket size	:	pcd 630 mm
Chain speed	:	1.1 m/s
Take up	:	STU
Material of Construction	:	
Base frame for drive	:	included
Foundation bolts	:	included

Intermediate casing	:	3 mm MS sheet fabricated
Top casing	:	6 mm MS sheet fabricated
Bottom casing	:	8 mm MS sheet fabricated
Shafts	:	C 45 steel
Sprockets	:	Cast steel
Buckets	:	3 mm MS sheet fabricated
Drive details	:	
Motor	:	
Worm reducer	:	7.5 HP, 1000 rpm, TEFC SC
Couplings	:	8", 40:1 ratio with hold-back to suit
Elevator Chain details	:	
Type	:	Link Chain with U-Shackles
Diameter	:	to suit
Total length	:	60 mts (approx)

5.25 Belt Conveyor with traveling tripper

Quantity	:	2 Nos.
Feed from	:	Bucket Elevator-1
Material handled	:	Crushed clinker
Lump size	:	< 25 mm
Capacity	:	25 tph
Belt width	:	650 mm
Flat/troughed	:	Troughed
Length of conveyor c/c	:	20 m (approx.)
Carrying Idlers	:	spaced at 1250mm
Return Idlers	:	spaced at 2500mm
Impact idlers	:	4 nos.
Head pulley	:	Dia.400 mm
Tail pulley	:	Dia.350 mm
Take-up	:	Screw take up
External scraper	:	1 no.
Internal scraper	:	1 no.
Skirt boards	:	3 m length at inlet
Deck plate	:	3mmx 3 m provided
Short support (1m height)	:	Provided
Drive details	:	
Belting:	:	
Type	:	650 mm w, Nylon 315/3
Grade	:	M24
Cover thk.	:	3/1.5 mm
Total length	:	45 m
Motor	:	3 hp, 1500 rpm, TEFC SC
Worm reducer	:	4", 30/1
Couplings	:	To suit
Tripper Motor	:	3 hp, 1500 rpm, TEFC SC
Tripper Worm reducer:	:	4", 30/1
Tripper Couplings	:	To suit

5.26 VSK Instrumentation

1) Water flow meter to noduliser	:	4 Nos.
2) Air flow meter for blower	:	4 Nos.
3) Air pressure meter for blower	:	4 Nos.
4) Temperature Indicator for chimney:	:	4 Nos.
5) Control desk for Kiln	:	4 Nos.

5.27 Wet Scrubber

Quantity	:	4 nos.
Location	:	Above VSK chimney
Service	:	to dedust VSK exhaust
Capacity	:	250 cu.m/min
Gas temperature	:	100 deg.C (max)
Float valve	:	Included
Construction	:	MS fabricated
Drive details	:	
Booster Fan - 4 Nos.	:	
: Capacity	:	300 cu m / min
: Pressure	:	150 mm WG
: Motor	:	15 HP, 1500 rpm
Pulleys and V-Belts	:	To suit
Water Pump - 4 Nos.	:	
: Capacity	:	200 lts / min
: Pressure	:	3.5 kg / cm ²
Pipes and Valves	:	To suit

5.28 Chutes and ductings for the above section

Quantity	:	1 set
Service	:	for equipment in the section
Construction	:	MS Fabricated

5.29 Passenger Lift

	:	Scope by Client	(OPTIONAL)
Quantity	:	1	
Load or Capacity	:	300 Kgs	
Lift height	:	23 mts (approx)	
From ground to 2nd floor of kiln building (I.e. Nodulizer floor)			

6.00 CLINKER HANDLING SECTION**Storage Yard (Pile stock)**

Clinker stock	:	4000 (8 bays)
Gypsum stock	:	750 (2 bays)

6.01 Bag Filter

Quantity	:	1 no.
Service	:	to dedust Tunnel
Location	:	Near Tunnel
Material handled	:	Clinker dust
Capacity	:	200 cu.m/min
Dust loading	:	50 gms/cu.m
Temperature	:	Ambient
Rotary feeder Motor	:	0.5 hp
Supporting structure	:	included
Foundation bolts	:	included

6.01a Vent fan for Bag Filter

Quantity	:	1 no.
Service	:	to vent clean air from Bag Filter
Location	:	After bag Filter
Capacity	:	220 cu.m/min
Pressure	:	200 mm WG
Suction valve	:	Manually operated Butterfly valve
Motor	:	20 hp, 1500 rpm

6.01b Compressor

Quantity	:	1 no.
Service	:	For Bag Filter Purging
Capacity	:	30 cu m / hr @ 7 kg / cm ² Pressure
Motor	:	10 HP, 1500 rpm TEFC SC
Pulleys & V Belts	:	To suit

6.02 Steel hoppers

Quantity	:	4 nos
Service	:	1) for Clinker - 2 nos. 2) for Puzzolona - 1 No. 3) Gypsum - 1 no.
Location	:	in tunnel
Capacity	:	1 cu.m
Size	:	1500x1500x750 mm
Construction	:	MS fabricated

6.03 Slide gates

Quantity	:	4 nos
Location: at discharge of	:	Steel Hoppers
Service	:	for Clinker - 2 nos. for Puzzolona - 1 No. for Gypsum - 1 no.
Size: for Clinker & Puzzolon:	:	545x545 mm
Size: for Gypsum	:	350x350 mm
Operation	:	Manual
Construction	:	MS fabricated

6.04 Clinker Weigh Feeders

Quantity	:	2 nos.
Location: at discharge of	:	Slide gate
Material handled	:	Clinker
Lump size	:	Below 20 mm
Feed rate	:	2.5 - 25 tph
Type	:	Electronic, Load cell type
Belt width	:	800 mm
Feeder length	:	2000 mm
Operating range	:	1:10
Electronic controls	:	Provided
Control panel	:	Provided
Accuracy	:	Plus/minus 0.5% of set rate
Drive details	:	
Motor	:	2 hp, 720 rpm with VFD
Gearbox	:	30/1 ratio
Couplings	:	to suit

6.05 Gypsum Weigh feeder

Quantity	:	1 no.
Location: at discharge of	:	Slide gate
Material handled	:	Gypsum
Lump size	:	Below 25 mm
Feed rate	:	0.5-5 tph
Type	:	Electronic, Load cell type
Belt width	:	800 mm
Feeder length	:	2000 mm
Operating range	:	1:10
Electronic controls	:	Provided
Control panel	:	Provided
Accuracy	:	Plus/minus 0.5% of set rate
Drive details	:	
Motor	:	1 hp, 720 rpm
Gearbox	:	70/1 ratio
Couplings	:	to suit

6.06 Puzzolona Weigh feeder

Quantity	:	1 no.
Location: at discharge of	:	Slide gate
Material handled	:	Puzzolona
Lump size	:	Below 25 mm
Feed rate	:	2 - 20 tph
Type	:	Electronic, Load cell type
Belt width	:	800 mm
Feeder length	:	2000 mm
Operating range	:	1:10
Electronic controls	:	Provided
Control panel	:	Provided
Accuracy	:	Plus/minus 0.5% of set rate

Drive details	:	
Motor	:	1 hp, 720 rpm
Gearbox	:	70/1 ratio
Couplings	:	to suit

If Gypsum used is Mineral Gypsum, it will have to be crushed to below 20 mm. A jaw crusher and a suitable handling system to be provided

6.07 Horizontal Belt Conveyor

Quantity	:	1 no.
Service	:	to convey material to Inclined Belt conveyor
Location: at discharge of	:	Clinker, Slag & Gypsum Feeders
Material handled	:	Clinker, Slag & Gypsum
Lump size	:	< 25 mm
Capacity	:	30 tph
Belt width	:	650 mm
Conveyor length	:	38 m c/c
Inclination	:	nil
Carrying idler spacing	:	1250 mm ~
Return idler spacing	:	2500 mm ~
Impact idlers	:	20 nos.
Head pulley	:	Ø 400
Tail pulley	:	Ø 350
Takeup	:	Horizontal Gravity take up
Deck plate	:	provided at inlet
Base frame & foundation bolts	:	Provided
Drive details	:	
Belting: Width	:	650 mm
Rating	:	315/3
Grade	:	M 24
Top/bottom cover	:	3/1.5 mm
Total length	:	81 m
Motor	:	5 hp, 1500 rpm
Gearbox	:	5", 30/1
Couplings	:	to suit

6.07A Inclined Belt Conveyor

Quantity	:	1 no.
Service	:	to convey material to Bucket elevator
Location: at discharge of	:	Horizontal Belt conveyor
Material handled	:	Clinker, Slag & Gypsum
Lump size	:	< 25 mm
Capacity	:	30 tph
Belt width	:	650 mm
Conveyor length	:	23 m c/c (approx)
Inclination	:	15 deg
Carrying idler spacing	:	1250 mm ~
Return idler spacing	:	2500 mm ~
Impact idlers	:	4 nos.

Head pulley	:	Ø 400
Tail pulley	:	Ø 350
Takeup	:	Screw take up
Deck plate	:	provided at inlet
Base frame & foundation bolts	:	Provided
Drive details	:	
Belting: Width	:	650 mm
Rating	:	315/3
Grade	:	M 24
Top/bottom cover	:	3/1.5 mm
Total length	:	51 m
Motor	:	5 hp, 1500 rpm
Gearbox	:	5", 30/1
Couplings	:	to suit

6.08 Bucket Elevator

Quantity	:	1 no.
Location	:	Below Belt Conveyor
Service	:	To elevate material
Material handled	:	Clinker
Bulk density	:	1.3 t/m ³
Type	:	Centrifugal - Belt type
Capacity	:	50 tph
Belt speed	:	1.32 m/s
Bucket: Size	:	410 x 200 x 215 mm dp
Capacity	:	9.6 litres
Spacing	:	460 mm
Size: Casing	:	1400 x 560 mm
Height	:	25 m c/c
Head Pulley size	:	dia 760 mm
Intermediate casing	:	3 mm MS sheet fabricated
Top casing	:	6 mm MS sheet fabricated
Bottom casing	:	8 mm MS sheet fabricated
Shafts	:	C 45 steel
Pulleys	:	MS Fabricated
Buckets	:	3 mm MS sheet fabricated
Base frame & Foundation bolts	:	included
Drive details	:	
Elevator Belt details	:	
Width	:	450 mm
Type	:	Nylon - Elevator Belting
Cover thickness	:	To suit
Total length	:	55 mts (approx)
Motor	:	15 hp, 1000 rpm, TEFC SC
Worm reducer	:	10", 30/1 ratio, with hold-back
Couplings	:	to suit

7.00 CEMENT MILL SECTION

7.01 Surge Hopper

Quantity	:	1 No.
Location	:	At feed end of cement mill
Service	:	To hold temporary stock
Material handled	:	Clinker & Gypsum
Capacity	:	15 cu.m (each)
No. of outlets	:	1 No.
Construction	:	MS Fabricated

7.02 Level Indicator

Quantity	:	1 no.
Type	:	Ultrasonic
Duty	:	Continuous

7.03 Slide gate

Quantity	:	1 no.
Location: at the discharge of	:	Below hopper
Type	:	Screw with wheel
Size	:	545x545 mm
Operation	:	Manual
Construction	:	MS fabricated

7.04 Weigh feeder

Quantity	:	1 no.
Location: at discharge of	:	Slide gate
Material handled	:	Clinker / Puzzolona / Gypsum
Lump size	:	Below 25 m
Feed rate	:	2-20 tph
Type	:	Electronic, Load cell type
Belt width	:	800 mm
Feeder length	:	2000 mm
Operating range	:	1:10
Electronic controls	:	Provided
Control panel	:	Provided
Accuracy	:	Plus/minus 0.5% of set rate
Drive details	:	
Motor	:	3 hp, 900 rpm with VFD
Gearbox	:	70/1 ratio
Couplings	:	to suit

7.05 Cement mill

Quantity	:	1 no.
Material handled	:	Clinker & Gypsum
Feed size	:	<20 mm
Moisture	:	2%
Feed Proportion	:	Clinker -75%, Gypsum-5%
Type of mill	:	Closed circuit
Capacity	:	25 tph
Product fineness	:	3500 Blaines
Size of mill	:	Dia.2.6 x Lg.10.5 m
No. of compartments	:	two

Mill Construction	:	
Shell	:	Mild steel, IS:2002, Gr. 2A 32 mm thk
Flange	:	Mild steel, IS:226
Trunions / Header:	:	CS, IS:1030, Gr.27-54
Girthgear	:	CS, IS:2708, Gr.3A
Pinion	:	EN 24, Forged steel
Liner plate thk	:	35 - 90mm
Trunion journal brg.	:	CS IS 1030 Gr. 27-54
	:	Lined with Lead based White Metal
Pinion shaft	:	C40, forged steel
Pinion shaft brgs:	:	Anti-friction roller bearings
Shell Liners	:	Mn Steel IS 276, Gr3
Diaphragm Liners	:	Mn Steel IS 276, Gr3
Drive details	:	
Grinding Media	:	Hyper Steel (IS:6079, 375 BHN)- 65 tons
Main motor	:	1250 hp, 1000 rpm TEFC Slip Ring (HT)
Main gearbox	:	Helical to suit, 7.1:1 ratio
Flexible coupling	:	to suit
Gear coupling	:	to suit
Inching Motor	:	20 hp, 1000 rpm
Inching Gearbox	:	To suit 70:1 ratio
Torsion shaft	:	to suit
Jaw coupling	:	to suit
Flexible coupling	:	to suit
Lubrication for main bearings with Mill Pre-jacking system	} :	Forced Lubrication system with pump – 2 Nos
Girth gear Lubrication system:	:	Included
7.05a Double Flap Valve		
Quantity	:	1 No.
Location at discharge of	:	Cement mill
Material handled	:	cement powder
Capacity	:	500 mm square
Construction	:	MS fabricated
7.06 Bag Filter for Mill		
Quantity	:	1 no.
Service	:	to dedust Cement Mill
Location	:	Near Cement Mill
Material handled	:	Cement powder
Capacity	:	350 cu.m / min
Dust loading	:	50 gms / cu.m
Temperature	:	90 deg C
Rotary Feeder motor	:	0.5 hp, (Geared motor)
Supporting structure	:	included
Foundation bolts	:	included
7.06a Vent Fan		
Quantity	:	1 no.
Service	:	to vent clean air from Bag Filter
Location	:	After bag Filter
Capacity	:	390 cu.m/min

Pressure	:	250 mm WG
Suction valve	:	Manually operated butterfly valve
Motor	:	40 hp, 1500 rpm
7.06b Compressor	:	
Quantity	:	1 no.
Service	:	For Bag Filter Purging
Capacity	:	40 cu m / hr @ 7 kg / cm ² Pressure
Motor	:	10 HP, 1500 rpm TEFC SC
Pulleys & V Belts	:	To suit
7.07 Pipe Screw Conveyor	:	
Quantity	:	1 No.
Location	:	At Cement Mill discharge
Purpose	: To Transfer :	Cement to Classifier circuit
Material handled	:	Cement
Capacity	:	60 tph
Type	:	O-Type
Screw Dia	:	300 mm
Screw Pitch	:	200 mm
Length	:	6 mts
Material of Construction	:	
Flights	:	5 mm plate
End plates	:	8 mm plate
Bearings	:	Anti-friction brgrs
Base frame & Foundation bolts	:	Included
Drive details	:	
Motor	:	15 hp, 1500 rpm, TEFC SC
Gearbox	:	8", 25/1 ratio
Couplings	:	To suit
7.08 Bucket Elevator	:	
Quantity	:	1 No.
Location	:	Discharge of Pipe Screw Conveyor
Material handled	:	Cement
Type	:	Centrifugal - Belt type
Capacity	:	60 tph
Size : Casing	:	1400 x 560 mm
Bucket: Size	:	410 x 185 x 190 mm dp
Capacity	:	8.26 lts
Spacing	:	460 mm
Height	:	25 m c/c (approx)
Belt speed	:	1.32 m/s
Take up	:	Screw type
Head Pulley size	:	dia 760 mm
Base frame for drive	:	included
Foundation bolts	:	included
Material of Construction	:	
Intermediate casing	:	3 mm MS sheet fabricated
Top casing	:	6 mm MS sheet fabricated
Bottom casing	:	8 mm MS sheet fabricated

Shafts	:	C 45 steel
Pulleys	:	MS Fabricated
Buckets	:	3 mm MS sheet fabricated
Drive details	:	
Elevator Belt details	:	
Width	:	450 mm
Type	:	Nylon- Elevator Belting
Cover Thickness	:	to suit
Total length	:	55 mts (approx)
Motor	:	20 hp, 1000 rpm, TEFC SC
Worm reducer	:	10", 30:1 ratio with hold-back
Couplings	:	to suit

7.09 Mechanical Classifier

Quantity	:	1 No.
Location	:	In mill circuit
Service	:	To segregate fines
Material handled	:	Mill output
Input capacity	:	60 tons
Size of classifier	:	Dia.4250 mm
Material of Construction	:	
Body	:	MS Fabricated
Shaft	:	C40 forged steel
Blades	:	MS plate with lining
Bearings	:	Anti-friction roller bearings.
Drive details	:	
Motor (Vertical)	:	60 hp, 720 rpm with VFD
Pulleys & V Belts:	:	To suit

7.10 Double Flap Valve

Quantity	:	1 No.
Location at discharge of	:	Classifier Grits end
Material handled	:	cement powder
Capacity	:	500 mm square

7.10a Solids Flow Meter

Quantity	:	1 No.
Location : at discharge of	:	Double Flap valve
Purpose	:	For Grits Weighing
Material handled	:	Cement Grits

7.11 Rotary Air lock

Quantity	:	1 no.
Location: at discharge of	:	Classifier (fines end)
Material Handled	:	Cement
Rotary valve diameter	:	400 mm
Capacity	:	30 TPH each

Construction	:	
Body	:	MS
Blades	:	MS
Shaft	:	En 8 / C 40
Bearings	:	Ball Bearings
Bearing Housing	:	MS
Feed & Discharge Chutes	:	MS
Drive details	:	
Geared motor	:	3 hp, 20 rpm, TEFC SC
Sprocket & chains	:	To suit
7.12 Grit Air slide		
Quantity	:	1 no.
Location: at discharge of	:	Classifier grit outlet
Material handled	:	Cement grits
Capacity	:	35 tph
Size	:	330 mm
Length	:	16 m approx
Airslide Cloth : Type	:	Silicon Treated
Drive details	:	
Motor	:	5 hp, 3000 rpm
Fan Capacity	:	15 m ³ /min @ 500mm WG
7.13 Product Air Slide		
Quantity	:	1 no.
Location: at discharge of	:	Classifier fines outlet
Material handled	:	Cement fines
Capacity	:	25 tph
Size	:	330 mm
Length	:	16 m approx
Airslide Cloth : Type	:	Silicon Treated
Drive details	:	
Motor	:	5 hp, 3000 rpm
Fan Capacity	:	15 m ³ /min @ 500mm WG
7.14 Airlift and Expansion Chamber		
Quantity	:	1 no.
Location : discharge of	:	Discharge of Product Airslide
Material handled	:	Cement Powder.
Capacity	:	25 TPH.
Size Diameter	:	1200 x 4000 mm. ht.
Lift	:	Max. : 30 m [Approx.]
Expansion Chamber	:	Considered.
Material of Construction	:	
Expansion chamber	:	MS fabricated
Supporting frame	:	MS fabricated
Cloth	:	Silicon treated
Chutes	:	MS fabricated
Base frame	:	Fabricated from ISMC Section
Pipe line	:	ERW

7.14a Roots Blower

Quantity	:	1 No
Capacity	:	35 cu m / min @ 5000 mm WG
Motor Rating	:	60 hp, 1500 rpm, TEFC SC
Pulleys, V Belts Size	:	To Suit.
All Pipes & Valves Size	:	To Suit.

7.15 Screw conveyor

Quantity	:	1 no.
Location : at discharge of	:	Airlift
Material handled	:	Cement
Capacity	:	25 tph
Type	:	U-Type
Screw dia.	:	400 mm
Screw pitch	:	400 mm
Conveyor length	:	6 m
Construction	:	
Flights	:	5 mm plate
Trough	:	5 mm plate
Cover	:	3 mm plate
End plates	:	8 mm plate
Bearings	:	Anti-friction brgs
Base frame & Foundation bolts	:	Included
Drive details	:	
Motor	:	5 hp, 1500 rpm, TEFC SC
Gearbox	:	6", 40/1 ratio
Couplings	:	To suit

7.16 Chutes and ductings for the Section

Quantity	:	1 set
Service	:	for equipment in the section
Construction	:	MS Fabricated

8.00 CEMENT STORAGE SECTION :**8.01 RCC Cement Silo**

	:	(SCOPE : BY CLIENT)
Quantity	:	1 no.
Location	:	Discharge of Screw Conveyor
Service	:	To hold cement stock
Type	:	Flat bottom
Capacity	:	1800 tons
Size	:	Dia.12 x ht. 16 m
Construction	:	In RCC

8.02 Aeration Pads

Quantity	:	1 set
Location: at bottom of	:	Silo
Service	:	To fluidise material
Pads: Body	:	MS fabricated
Cloth	:	Silicon treated
Piping & valves	:	Included

8.02a Emptying Roots Blower

Quantity	:	1 no.
Service	:	for emptying
Capacity	:	22 cu. m/min
Pressure	:	5 m WG
Motor	:	40 hp, 1500 rpm TEFC SC
Pulleys & V-Belts	:	To suit

8.03 Level Indicator

Quantity	:	1 no.
Type	:	Electro-Mechanical
Duty	:	Continuous

8.04 Bag Filter for Silo dedusting

Quantity	:	1 no.
Location	:	On top of storage silo
Service	:	To dedust Silo
Gas temperature	:	45 deg.C
Dust loading	:	50 gms/m ³
Type	:	Reverse jet
Capacity	:	100 m ³ /min
Rotary feeder motor	:	0.5 hp (Geared Motor)
Supporting structure	:	included

8.04a Vent Fan for Bag Filter

Quantity	:	1 no.
Service	:	to vent clean air from Bag Filter
Location	:	After bag Filter
Capacity	:	110 cu.m/min
Pressure	:	200 mm WG
Suction valve	:	Manually operated Butterfly valve
Motor	:	10 hp, 1500 rpm
V-pulley drive	:	to suit

8.04 b Compressor

Quantity	:	1 no.
Service	:	For Bag Filter Purging
Capacity	:	30 cu m / hr @ 7 kg / cm ² Pressure
Motor	:	7.5 HP, 1500 rpm TEFC SC
Pulleys & V Belts	:	To suit

8.05 Chutes and ductings for the Section

Quantity	:	1 set
Service	:	for equipment in the section
Construction	:	MS Fabricated

9.00 PACKING SECTION**9.01 Slide Gate**

Quantity	:	1 No.
Location: at the discharge of	:	Cement silo
Type	:	Screw with wheel
Size	:	545x545 mm
Operation	:	Manual
Construction	:	MS fabricated

9.02 Vertical Rotary Feeder

Quantity	:	1 No.
Location: at outlet of	:	Slide Gate
Service	:	To regulate feed
Material handled	:	Cement
Capacity	:	60 tph
Size: Diameter	:	1000 mm
Construction	:	
Body	:	MS fabricated/machined
Rotor	:	MS fabricated/machined
Bearings	:	Anti-friction bearings
Shaft	:	C40
Drive details	:	
Geared motor	:	5 hp, 28 rpm (VFD)
Chain drive	:	To suit

9.03 Air Slide

Quantity	:	1 no.
Location: at discharge of	:	Vertical Rotary Feeder
Material handled	:	Cement
Capacity	:	60 tph
Size	:	330 mm
Length	:	16 m approx
Airslide Cloth	Type :	Silicon Treated
Drive details	:	
Motor	:	5 hp, 3000 rpm TEFC SC
Fan Capacity	:	15 m ³ /min @ 500mm WG

9.04 Bucket Elevator

Quantity	:	1 no.
Location: at discharge of	:	Screw Conveyor
Service	:	To elevate material
Material handled	:	Cement
Bulk density	:	1.3 t/m ³
Type	:	Centrifugal - Belt type
Capacity	:	60 tph
Belt speed	:	1.32 m/s
Bucket: Size	:	410 x 185 x 190 mm dp
Capacity	:	8.26 lts
Spacing	:	460 mm
Size: Casing	:	1400 x 560 mm
Height	:	20 m c/c

Head Pulley size	:	dia 760 mm
Intermediate casing	:	3 mm MS sheet fabricated
Top casing	:	6 mm MS sheet fabricated
Bottom casing	:	8 mm MS sheet fabricated
Shafts	:	C 45 steel
Pulleys	:	MS Fabricated
Buckets	:	3 mm MS sheet fabricated
Base frame & Foundation bolts	:	included
Drive details	:	
Elevator Belt details	:	
Width	:	450 mm
Type	:	Nylon -Elevator belting
Cover Thickness	:	To suit
Total length	:	45 mts (approx)
Motor	:	15 hp, 1000 rpm, TEFC SC
Worm reducer	:	10", 30/1 ratio, with hold-back
Couplings	:	to suit

9.05 Vibrating Screen

Quantity	:	1 no.
Service	:	To remove nibs and granules
Material handled	:	Cement
Capacity	:	60 TPH
Size	:	1000 mm x 2000 mm
Constructic :	:	
Body	:	MS Fabricated/machined
Bearings	:	Anti-friction bearings
Shaft	:	C40
Drive details	:	
Motor	:	5 hp, 1500 rpm

9.06 Twin Surge Hopper

Quantity	:	1 no.
Location: at the outlet of	:	Vibrating Screen
Material handled	:	Cement
Capacity	:	15 cu.m (Each)
Construction	:	MS fabricated
No. of Outlets	:	Two

9.07 Level Indicator

Quantity	:	1 no.
Type	:	Ultrasonic
Duty	:	Continuous

9.08 Slide Gate

Quantity	:	2 nos.
Location: at the discharge of	:	Twin Surge Hopper
Type	:	Screw with wheel
Size	:	545 x 545 mm
Operation	:	Manual
Construction	:	MS fabricated

9.09 Packing machine

Quantity	:	2 nos.
Location	:	Below Steel Hopper
Service	:	To pack cement
Type	:	Two – spout
Capacity	:	30 tph (each)
Construction	:	MS fabricated
Motor – 4 Nos	:	7.5 hp, 1500rpm– 4 Nos.

9.09A Compressor

Quantity	:	1 no.
Service	:	For Packing Machine
Capacity	:	40 cu m / hr @ 7 kg / cm ² Pressure
Motor	:	10 HP, 1500 rpm TEFC SC
Pulleys & V Belts	:	To suit

9.10 Spillage hopper

Quantity	:	2 nos.
Location	:	Below Packer
Service	:	To collect spilled cement
Construction	:	MS fabricated

9.11 Slide Gate

Quantity	:	2 nos.
Location: at the discharge of	:	Spillage Hopper
Type	:	Screw with wheel
Size	:	350x350 mm
Operation	:	Manual
Construction	:	MS fabricated

9.12 Spillage Screw Conveyor

Quantity	:	2 nos.
Location: at discharge of	:	Spillage hopper Slide gate
Material handled	:	Cement
Capacity	:	5 tph
Type	:	U-Type
Screw dia.	:	230 mm
Screw pitch	:	230 mm
Conveyor length	:	6 m
Construction	:	
Flights	:	3 mm plate
Trough	:	5 mm plate
Cover	:	3 mm plate
End plates	:	8 mm plate
Bearings	:	Anti-friction brgs
Drive details	:	
Geared motor	:	3 hp, 36 rpm
Coupling	:	To suit

9.13 Bag Handling Conveyor

Quantity	:	2 nos.
Location: at discharge of	:	Packer
Service	:	To convey bags to Truck
Type	:	Flat, rough top
Belt width	:	600 mm
Conveyor length	:	10 m
Capacity	:	600 bags/hr
Flat carrying idlers	:	300 mm spacing
Return idlers	:	1500 mm spacing
Head pulley	:	Dia 200 mm
Tail pulley	:	Dia 200 mm
Take-up	:	STU
External scraper	:	1 no.
Internal scraper	:	1 no.
Deck plate	:	3mm thk.
Discharge chute	:	Provided
Support legs	:	Provided
Drive details	:	
Belting details	:	
Width	:	600 mm
Make	:	Nylon 315/3
Grade	:	M24
Cover	:	5/1.5 mm
Type	:	Rough top
Belting	:	25 m long (appx)
Geared motor	:	3 hp, 58 rpm
Chain drive	:	To suit

9.14 Bag Filter for Packing machine dedusting

Quantity	:	1 no.
Service	:	To dedust Packing machine
Gas temperature	:	45 deg.C
Dust loading	:	50 gms/m ³
Type	:	Reverse jet
Capacity	:	200 m ³ /min
Rotary feeder motor	:	0.5 hp (Geared Motor)
Supporting structure	:	included

9.14a Vent Fan for Bag Filter

Quantity	:	1 no.
Service	:	to vent clean air from Bag Filter
Location	:	After bag Filter
Capacity	:	220 cu.m/min
Pressure	:	200 mm WG
Suction valve	:	Manually operated Butterfly valve
Motor	:	15 hp, 1500 rpm
V-pulley drive	:	to suit

9.14b Compressor

Quantity	:	1 no.
Service	:	For Bag Filter Purging
Capacity	:	30 cu m / hr @ 7 kg / cm ² Pressure
Motor	:	7.5 HP, 1500 rpm TEFC SC
Pulleys & V Belts	:	To suit

9.15 Chutes and Ductings for the section

Quantity	:	1 set
Service	:	for equipment in the section
Construction	:	MS Fabricated



MAKONDE CEMENT LIMITED

P. O. Box 23418
Dar es Salaam
TANZANIA

Phone: +255 22 266 6617
Fax: +255 22 266 7148
Mobile: +255 76 294 2346

LIST OF PLANT & EQUIPMENT REQUIRED FOR PROPOSED CEMENT PLANT – MTWARA

*NOTE: EXCLUDES BUILDING MATERIALS REQUIRED
FOR CONSTRUCTION PHASE.*

LIST 1 & 2 CEMENT PLANT & EQUIPMENT, OTHER PLANT & EQUIPMENT, VEHICLES AND AIRCRAFT

- Movers India Ltd – complete cement plant consisting of BUT not inclusive as other items will be added/omitted with the final order – see attached schedule.
 - Value approximately US\$ 16,311,000
- Quarry Plant & Equipment
 - As per Mantrac Tanzania quotations attached – US\$ 2,395,500.00
 - As per Atlas Copco quotation – US\$ 69,188.00
- Vehicles
 - – as per attached Toyota Tanzania & DT Dobie quotations– US\$ 406,191.00
 - Trucks – 30 t horses - per DT Dobie US\$ 420,000.00
- Jabiru Aircraft – as per attached price schedule US\$ 74,285.00
- **Total Plant & Equipment, Vehicles & Aircraft** **US\$ 19,676,164.00**

LIST 3 OFFICE & LABORATORY EQUIPMENT

- Office Computers and V-Sat equipment US\$ 26,800.00
- Office furniture US\$ 24,500.00
- Air conditioning and general cooling of offices and control room US\$ 18,600.00
- Laboratory equipmentex Movers India US\$ 141,000.00
- **Total Office & Laboratory Equipment** **US\$ 210,900.00**

**LIST 4
MISCELLANEOUS ITEMS**

• Clinic Equipment	US\$ 16,230.00
• Clinic medical stocks	US\$ 12,500.00
• Fridges and air-conditioners	US\$ 11,750.00
• Water Purification equipment	US\$ 14,350.00
• Security equipment – CCTV Etc	US\$ 8,650.00
• Weigh Bridge	US\$ 28,650.00
• www	
• Total Miscellaneous Items	<u>US\$ 92,130.00</u>

SUMMARY TOTAL OF ABOVE

• LIST 1 &2	US\$ 19,676,164.00
• LIST 3	US\$ 210,900.00
• LIST 4	<u>US\$ 92,130.00</u>
• TOTAL OF ALL ITEMS REQUIRED FOR CONTRACT	<u>US\$ 19,979,194.00</u>



FEE PAID BANK 16500/-
RECEIPT NO. 33283154
DATE 15/9/2008

BOARD RESOLUTION

16500/-
15 SEP 2008
25th July 2008

Present
AZANIA CORPORATION LIMITED
M.Sinani

At aboard meeting held at Bish House Plot 568/570 on 25th July at 16.00 hours the following was resolved

1. Mr. Marco Martinz has resigned as a Director of the company.
2. That Mr. Neil Charles Garden was appointed a Director of the company with immediate effect
3. That the following are related to Mr. Marco Martinz and his shares in this company
 - a. Per e-mail dated 28th May 2008 Mr. Marco Martinz confirms he is no longer interested in being involved in this company and has relinquished his shares accordingly.
 - b. It is also noticed that whilst a shareholder in company Mr. Marco Martinz did not honour his obligations as a shareholder in that he never contributed towards all the costs of setting up and undertaking various studies required in order for the company to raise capital and debt finances.
4. M Martinz shares (10 No) and Azania Corporation Ltd (80 No) being total or 90% of the issued shares are hereby transferred to
Azani International S.A of Panama
8th Floor Via Espania 122
P.O.Box 081600548, Panama 5
Panama
5. That the new head office of Makonde Cement Ltd is
Tanu Road
32/33 CTRB Building
P.O. Box 767
Mtwara.

6. That all the above be registered with BRELA as soon as possible.

There being no further business the meeting closed at 16.15

Signed

A handwritten signature in black ink, appearing to be 'J. M. A.', written over the word 'Signed'.

Azania Corporation Limited

Names, Addresses, and Description of Subscribers.	Number of shares taken by each Subscriber	Signature
AZANIA CORPORATION LTD P. O. BOX 23418 DAR ES SALAAM	80	<i>Moshare</i>
MARCO MARTINZ P. O. BOX 23418 DAR ES SALAAM	10	<i>Martinez</i>
MOHAMMED SAID SINANI P. O. BOX 94 MTWARA	10	<i>S.S.</i>

Dated at..... *DfM* this *11th* day of *December* 200*7*.....

Witness to the above signatures:

Name :
 Signature :
 Postal Address :
 Qualification :



THE COMPANIES ACT 2002

COMPANY LIMITED BY SHARE

MEMORANDUM AND ARTICLES

OF

ASSOCIATION

OF

MAKONDE CEMENT LIMITED

Incorporated this 12th day of *December* 2007

Drawn by:

Mohamed S. Sinani
(Subscriber)
P.O. Box 23418
DAR ES SALAAM.

THE COMPANIES ACT 2002
COMPANY LIMITED BY SHARES
MEMORANDUM OF ASSOCIATION
OF
MAKONDE CEMENT LIMITED

TANZANIA

Stamp Duty Shs. 5000/-

PAYED ON ORIGINAL

Receipt 2045639 11/12/07

Stamp Duty Officer

TANZANIA

Stamp Duty Shs. 2500/- Paid

Receipt 2045639 11/12/07

Stamp Duty Officer

Asst. Registrar of Companies

1. The name of the company is **"MAKONDE CEMENT LIMITED"**
2. The Registered office of the Company will be situated in Tanzania.
3. The objects for which the Company is established are:-
 - (a) To carry on the business of cement producers, importers, exporters, traders and dealers; to own operate and maintain stone quarry concrete mixers and aggregate plants.
 - (b) To carry on the business as owners and operators, transporters of cement, concrete and aggregate for construction purposes, exporting purpose or any other bulky needs.
 - (c) To own and operate and run out lets for sale of cement and other building materials; supplies of cement and other building material for construction purposes.
 - (d) To carry on the business of clearing and forwarding agents, commission agents, transporters, freighters, hauliers, customs bonded warehouse and godown keepers, cargo and travel agents, insurance agents, tourist agents, manufacturers' representatives, road contractors, cargo superintendents, packers, machinery haulage specialists, warehousemen, engineers, electricians, motor cars, cabs, omnibus, lorries, oil tank and coach proprietors and transporters, civil transport contractors and transporters by any other means of conveyance of people and goods in Tanzania and the neighbouring countries and in such other place or places as may from time to time be determined by the company, engage in and or otherwise carry on the business as transporters and transport agents, freight forwarders.
 - (e) To carry on the business of building contractors, masonry and general construction contractors and among other things to construct, execute, carry out, equip, improve, work and advertise railways, tramways, docks harbours, sharves, canals, water-courses, irrigations, reclamations, sewage, drainage and other sanitary works, water, gas, electric and other supply works, houses, building and erections of every kind.
 - (f) To carry on the business as general traders, wholesalers, retailers suppliers, merchants, stockists, and dealers in all types of spare parts and maintenance, tyres, tubes, tools and accessories for all types of automotive, motor vehicles, agricultural machinery, implements, equipment, all kinds of industrial projects machinery and equipment, electrical goods, hardware, building materials,

timber, fishing gears, groceries, computers, office equipments, cooking oils, salts, foodstuffs, cosmetics, oils, paints, spirits sheets, hinges, screws, iron mongery, textiles piece goods, all types of leather goods, shoes, bags and other similar goods.

- (g) To carry on the business of dealing in importing, exporting, marketing, manufacturing stocking, buying, selling whether by wholesale or retail of various categories of goods and merchandise, and to act as commission agents, brokers, insurance agents and manufacturers, representatives in all fields. To be agent of foreign company and to establish business enterprises whether small scale, industries and generally deal in all kinds of general merchants and to import, export and all either by merchandise and articles of all description.
- (h) To engage in investment scheme for construction, rehabilitation, erection, ownership and management of commercial buildings, export processing zones and special economic zones, to buy, sell, hire, manufacture, trade, and deal in property, goods, produce, articles, and merchandise of all kinds and transact any and every description as development agency, distribution, marketing, commercial, industrial, manufacturing, mercantile, insurance and financial business and carry on the business of traders, general merchants, general storekeepers, metals, commission agents, business consultants, market research consultants, business transfer agents, company promoters, underwriters, financiers and bill brokers, del-credere agents, barter traders, court brokers, auctioneers and generally to execute and undertake agencies of all kind or carry on the business of warehouse construction, landscaping, engineering, general civil works and deal in all kinds of scrap metal and precious metals.
- (i) To carry on the business of traders, general merchants, commission agents, manufacturers representatives and to buy, sell, hire, manufacture, barter, trade and deal in property, mechanical machine shop, spare parts and machinery of every description, goods and articles and merchandise of all kinds and to transact any and every description of agency, commission, distribution, marketing, commercial, industrial, manufacturing, merchantile, insurance and financial business.
- (j) To carry on the business as general distributors of all sorts and types of products and services to individuals, offices, industries, shops, schools, factories, hospitals, army, military, ministries and all other government offices, universities and all other places where the services of a supplier are needed.
- (k) To carry on the business of establishing and running supermarkets, department stores, shopping malls, provision stores, groceries and shops of all kinds and description and generally to deal with such activities.
- (l) To carry on the business of household, domestic appliance and electrical goods, electronic items, audio visual goods, building material, hardwares, foodstuff, agricultural products and merchandise of every nature, kind and description

whatsoever as a dealer, wholesaler, retailer, distributor, importer, exporter and after sales service and repairing.

- (m) To carry on the business and act as managers of investments and investment company, business of property managers, developers, real estate agents valuers, decorators, engineers and to generally be able to carry out activities of any description with regards to land, property and real estate, investment in any type of property, buildings, lands, securities, bonds, shares and any property act as a holding company with subsidiaries and invest in any projects as the company may think fit.
- (n) To carry on the business of marketing, services, consultancy and selling of all types of information technologies, computer systems, conference systems, telecommunication systems, security systems, public address systems, data communication and to train, research, install and after sale services of electronic systems, voice and data networks and any other systems or components which the company may think fit, necessary or incidental to this business.
- (o) To carry on the business as manufacturers, principals or agents representatives of importing, exporting, buying, selling, distributing of new and used motor vehicles, cars, trucks, lorries or other vehicles, motor vehicles spares and parts of all descriptions, railway, fuel and other oils, petroleum of all kinds, tyres and tubes, batteries, battery solution and other spares, accessories, motor cycles, bicycles, tractors, mining equipments, fishing gears, agricultural and industrial machinery and equipments, new and second hand spare parts and accessories and generally to deal in all types of motor spare parts and industrial and agricultural machinery and parts, electronic goods and accessories thereof.
- (p) To carry on all or any of the business of transport, clearing and forwarding, carriage and haulage contractors, owners and charter of road vehicles, aircraft and ships and boats of every description and carriers of goods and passenger by road, rail, water or air and to establish, acquire, maintain and operate transport service of every description both public and private and all services ancillary thereto and for such purposes or as independent undertakings to purchase, take in exchange, charter, hire, build, contract or otherwise acquire and to own, operate, work, manage, maintain, repair, service and deal with and in road vehicles, aircraft and vessels of every supplies therefore and to conduct any such business within the country or any other state in Africa or Europe or Asia and or any other foreign country.
- (q) To manufacture all kinds and varieties of mechanical appliances, instruments and machines and any and all processes and products essential thereto.
- (r) To provide the business of tour operators, travel agents, tourist agents and contractors, insurance, forwarding and general agents, aircraft and ship owners, charters, hotels, apartment and lodging house keepers, caterers, advertising agents and generally to facilitate traveling and provide for tourists and travelers or promote and provisions of facilities of every description and in

particular by means of booking of travel ticket and hotel and lodging accommodation, providing guides, safe deposits, inquiry bureaux and baggage transport and arranging and operating tours.

- (s) To carry on the business of miners and mining in all their branches and for the said purpose to peg, purchase, take on lease, or exchange or otherwise acquire concessions, grants, easements, options, claims, properties, cassettes and effects supposed to contain minerals, diamonds, or other precious stones, and any interest therein, and to explore, mine, work, excise develop and turn to account mines and mining rights and any undertaking connected therewith.
- (t) To be general real estate developers and managers. To provide all kinds of estate development schemes, to acquire land for purposes of developing dwelling properties of all kinds and description for sale, letting and or other acceptable arrangements. To be general building contractors and land development investors.
- (u) To carry on business as safari and photographic outfitters and to equip, organise and arrange hunting, photographic, cinematic, exploration and cinematographic expeditions and generally to organise and provide facilities for tourist safari adventures of every kind including but not limited to game, fishing, river canoeing, and other safaris and expeditions of every description, photographers, suppliers and caterers for hunting, fishing, photographic, sight seeing and other expeditions whatsoever.
- (v) To advance money to any person or persons or corporations, either with or without interest upon the security of freehold or leasehold property by way of mortgage, or upon marketable security and in particular to advance money to shareholders in the company, and others, upon the security of or for the purpose of enabling the person borrowing the same to effect or purchase, or enlarge or repair any house of building or to purchase the free simple or any term or terms of years of any property in Tanzania, or elsewhere upon such terms, and conditions as the Company may think fit.
- (w) To carry on the business of spare parts for different types of machines and instruments including motor vehicles, cars, trucks, lorries or other vehicles, agricultural implements, mining implements and any other machinery, tool maker, metal workers, boil makers and any other kind of machine whatsoever.
- (x) To engage in and carry out the business of proprietors and managers of hotels, restaurants, cafes, road houses, motels, safari and holiday camps, caravan sites, guest houses, apartment housekeepers, refreshment and tea rooms, milk and snacks bars, tavern, beer house and lodging housekeepers and to provide food and catering services to individuals, private and public institutions and to industrial and business concerns.
- (y) To purchase, take on lease and otherwise acquire for investment or resale any estate, land, buildings, easements and other rights and interests in immovable property or any tenure in Tanzania and elsewhere and to sell let or lease

exchange or otherwise dispose of or grant rights over any immovable property, belong to the company.

- (z) To purchase, take or lease or in exchange, hire or otherwise acquire and hold any state or interest in any lands buildings, casements, rights, licenses secret processes, machinery, plants, stock, in trade and real or personal property of any kind.
- (aa) To accept payment for any property or rights sold or otherwise disposed or dealt with by the company either in cash, by installment or otherwise or in fully or partly paid up shares of the company or corporation, with or without deferred or preferred or guaranteed rights.
- (bb) To carry any other trade or business whatever which can in the opinion of the Board of Directors be advantageously carried on by the Company in connection with the above business or the general business of the company.
- (cc) To act as agents for the sale and purchase of any stocks shares or securities or for any other monetary or mercantile transactions.
- (dd) To act as executors and trustees of wills and settlements made by customers and others and undertake and execute trusts of all kinds.
- (ee) To do all or any of the above things in any part of the world and either as principals, agents, trustees, contractors or otherwise, and either alone or in conjunction with others and either or though agents, sub-contractors, trustees and otherwise.
- (ff) To remunerate any person, firm or company rendering services to this company, whether by cash payments or by allotment to him or them of shares or securities of the Company credited and paid in full or in part, otherwise.
- (gg) To accept for safe custody and keep for customers of the company all kinds of securities valuables and things.
- (hh) To lend money on any terms that may thought fit, and particularly to customers or other person or corporations having dealing with societies and to give any guarantees that may be expedient.
- (ii) To advance money to shareholders in the company, and other to the purpose of enabling the person borrowing the same erect or purchase, or enlarge or repair any house or building or to purchase the fee simple or any less estate or interest in, or to take a demise for any term or terms of years of any freehold or leasehold property upon such terms and conditions as the company may think fit.
- (jj) To invest and deal with the moneys of the Company not immediately required, upon such securities and in such manner as may from time to time be determined.

- (kk) To distribute among the members in pieces any property of the company, or any proceeds of sale or disposal of any property of the company.
- (ll) To draw, make, accept, endorse, discount execute and issue promissory notes, bills of lading, warrants, debentures and negotiable or transferable instruments.
- (mm) To act as agents or brokers, and as trustees for any person firm or company, and to undertake and perform sub-contracts and also to act in any other business of the company through or by means of agents, brokers, sub-contractors or others.
- (nn) To obtain any provisional order, ordinance or act of Parliament for enabling the Company to carry any of its objects into effect, or for affecting any modification of the Company's constitution, or any other purpose which may seem expedient, and to oppose any proceedings or applications which may seem calculated, directly or indirectly to prejudice the company's interest.
- (oo) To take or otherwise and hold shares in any other company having objects altogether or in part similar to this company, or carrying on any business capable of being conducted so as directly or indirectly to benefit the company.
- (pp) To transact or carry on all kinds of Agency business and in particular in relation to the investment of money, the sale of property, and the collection and receipt of money.
- (qq) To do all other things as may be deemed incidental or conducive to the attainment of the objects or any of them.

And it is hereby declared that:-

The word "company" in this clause, except where used in reference to this Company, shall be deemed to include any partnership or other body of persons, whether corporate or unincorporated, and whether domiciled in the United Republic of Tanzania or elsewhere.




The objects specified in each of the paragraphs of this clause shall be regarded as independent objects, and accordingly shall in no way be limited or restricted (except where otherwise expressed in such paragraphs) by reference to or inference from the terms of any other paragraph of the name of the Company but may be carried out in as full and ample a manner and construed in as wide a sense as if each of the said paragraphs defined the objects of the separate and distinct company.

That the meaning of any general word or words in any paragraph of this clause shall not be restricted by being construed ejusdem generis with any particular word or words in the same paragraph.

4. The Liability of the Members is Limited.
5. The capital of the Company is Shillings 10,000,000/= divided into 100 shares of Shillings 100,000/= each.

The Company shall have powers to increase its capital and to divide the shares in its capital for the time being into several classes of stock or shares and to attach thereto respectively such preferential, deferred or special rights, privileges, or conditions as may be determined by or in accordance with the Articles of Association of the Company.

We, the several persons whose names and addresses are subscribed, are desirous of being formed into a company, in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in the capital of the Company set opposite our respective names.

Names, Addresses, and Description of Subscribers.	Number of shares taken by each Subscriber	Signature
AZANIA CORPORATION LTD P. O. BOX 23418 DAR ES SALAAM	80	
MARCO MARTINZ P. O. BOX 23418 DAR ES SALAAM	10	
MOHAMMED SAID SINANI P. O. BOX 94 MTWARA	10	

Dated at... *Dsm* this... *11th* day of... *December* 200*7*

Witness to the above signatures:

Name :
 Signature : *Dsm*
 Postal Address :
 Qualification :



TANZANIA

Stamp Duty Shs. 5000/-

PAID ON ORIGINAL

Receipt BOYSS 11/12/07

Stamp Duty Officer

THE COMPANIES ACT 2002
COMPANY LIMITED BY SHARES
ARTICLES OF ASSOCIATION
OF
MAKONDE CEMENT LIMITED

TANZANIA

Stamp Duty Shs. 2800/- Paid

Receipt BOYSS 11/12/07

Asst. Registrar of Companies

PRELIMINARY

1. In these regulations:-

“The Act” means the Companies Act 2002 of the Laws of Tanzania.

When any provision of the Act is referred to, the reference is that provision is as modified by any law for the time being in force.

Unless the context otherwise requires, the expressions defined in the Act or any statutory modification thereof in the force at the date at which these regulations become binding on the company, shall have the meaning so defined.

Any words importing the singular shall include the plural and vice versa, and words importing the masculine gender shall include females, and the words importing persons shall include bodies corporate, partnership, firms, cooperatives, societies, etc.

The regulations of Companies Act shall not apply to the company, save in so far as they are varied or excluded hereby, but in case of any conflict between the provisions herein, and the provisions under this regulation the former shall prevail, and in addition to substitution shall be the regulations of the company.

PRIVATE COMPANY

2. The Company is a Private Company and accordingly:-

- (a) The right to transfer shares is restricted in manner hereinafter prescribed.
- (b) The number of members of the company (exclusive of persons who are in the employment of the Company and of persons who have been formerly in the employment of the company were while in such employment to be the member of the company) is limited fifty, provided that where two or more persons hold one or more shares in the company jointly they shall for the purpose of this regulation be tested as a single member.
- (c) Any invitation to the public to subscribe for any shares or debentures of the Company is prohibited.
- (d) The Company shall not have power to issue share warrants to bearer.

TRANSFER OF SHARES

3. The Directors may in their direction and without assigning any reason thereof refuse to register the transfer of any share to any person who it shall in their opinion be undesirable for any reason whatsoever to admit to membership.
4. Subject to clauses 2 and 3 hereof the right to members to transfer their shares shall be restricted as follows;
 - (a) No share shall be transferred to a person who is not a member so long as any member of any person selected by the Directors as one who it is desirable in the interest of the Company to admit to membership.
 - (b) Every shareholder or trustee in bankruptcy, or any person who may desire to sell or transfer any such shares and every who may desire to sell or transfer any such shares and every personal representatives of a deceased shareholder shall give notice in writing to the Directors that he desires to make such sale or transfer. Such notice shall constitute the Board of Directors of the Company as his agent for the sale of the said shares to any member or members of the company at the price to be agreed upon between the party giving such notice the party and the board, or in case of difference to be determined by the Auditor of the Company.
 - (c) Upon price of such shares being agreed on a determined as per clause (b) above, the board shall forthwith give notice to such of the shareholders other than the shareholders desiring to sell or transfer the said shares, stating the number and price of such share inviting the person to whom notice is sent to state within 21 days from the date of such notice whether he is willing to purchase any, if so what maximum number of such shares. At the expiration of such days 21 notice the board shall apportion such shares amongst the shareholders (if more than one) who shall have expressed their desire to purchase number of shares already held by them respectively, or if there be only one such shareholder, that the whole of such shares shall be sold to him, provided no shareholder shall be obliged to take more than the maximum number of such shares stated in his answer to the said notice.

Upon such apportionment being made or such one shareholder notifying his intention to purchase, as the case may be, the party desiring to sell or transfer such shares shall be bound upon payment of the said price to transfer the shares to the respective shareholders or to single shareholder who shall have agreed to purchase the same.

5. GENERAL MEETINGS: NOTICE OF GENERAL MEETING AND PROCEEDINGS OF THE GENERAL MEETINGS.

- (a) A General Meeting, Ordinary or Extraordinary may with the consent in writing of all members, be convened on a shorter notice than seven days or without notice.

- (b) Two members, present either personally or by proxy shall form a quorum.
- (c) Any ordinary resolution of the company determined without any general meeting and evidenced by writing under the hands of majority of the Directors and of the members of the company holding three - fourths of the issued shares of the company shall be valid and effectual as an ordinary resolution duly passed at a general meeting of the company.

6. DIRECTORS

- (a) Until otherwise determined by the company in General Meeting the Directors shall not be less than two and not more than seven in number.
- (b) The following persons shall be the first Directors of the company:-
 1. AZANIA CORPORATION LTD
 2. MARCO MARTINZ
 3. MOHAMMED SAID SINANI

7. The shareholding qualification for Directors may be fixed by the company in General Meeting, and unless and until so fixed no qualification shall be required.

8. The quorum of Directors for transacting business shall, unless otherwise fixed by the Directors, be two.

9. A resolution in writing signed by all the Directors then in Tanzania shall be as valid and effectual as if it had been passed at a meeting of Directors duly called and constituted.

10. The Directors may from time to time borrow or raise any money for the purposes of the Company which may exceed the issued share capital of the company.

BORROWING POWERS

The Directors may from time to time in their discretion raise or borrow for the purpose of any Company's business such sum or sums of money as they think fit.

11. The Directors may secure the repayment of or raise any such sum or sums as aforesaid by mortgage or charge upon the whole or any part of the property and assets of the Company present or future including its uncalled capital for the time being, or by the issue at such price as they may think fit, of bonds or debentures either charged upon the whole or any part of the property and assets of the company or not so charged or in such other way as the Directors may think expedient.

VOTE OF MEMBERS

12. On a show of hands every member present in person shall have one vote. On a roll every member shall have one vote only for the shares of which he is holder.

13. No member shall be entitled to vote at any general meeting unless all calls or other sums presently by him in respect of shares in the Company have been paid.

DISQUALIFICATION OF DIRECTORS

14. The office of a Director shall be vacated if the Director;
- (a) becomes bankrupt; or
 - (b) is found to be a lunatic or becomes of unsound mind; or
 - (c) resigns his office by notice in writing to the Company;
 - (d) abstains himself from meetings of the directors for a period of six months without special leave of absence from the other Directors.

SEAL

15. The Directors shall provide for the safe custody of the Seal. The Seal of the Company shall not be affixed to any instrument except by the authority of a resolution of the Board of Directors and in the presence of at least two Directors or a Director and Secretary or other person as aforesaid shall sign every instrument to which the seal of the Company is so affixed in their presence.

ALTERNATE DIRECTORS

16. Any director shall have power to nominate any person to act or attend as alternate Director during his absence or during his inability so to act. Such Director shall be subject in all respects to the terms and conditions existing with reference to the other Directors and such Alternate Director shall exercise and discharge all the duties of Director whom he represents.
17. Unless otherwise decided by the Directors the quorum necessary to transact business of the Directors shall be two Directors personally present.

SECRETARY

18. The Secretary shall be appointed by the Board for such terms at such remuneration and upon such condition as it may think fit, and any Secretary so appointed may be removed by the Board.

WINDING UP

19. With the sanction of a special resolution of the shareholders any part of the assets of the Company including any shares in other Companies may be divided between the members of the Company in special or may be vested in Trustees for the benefit of such members and the liquidation of the company may be closed and the company dissolved but so that no member shall be compelled to accept any shares whereupon there is any liability.

ALTERNATION OR ADDITION

20. Subject to the provisions of the Act and to those contained in the Memorandum of Association the Company may by Special Resolution make alteration or addition so made shall be as valid and effectual as if originally contained in those articles and be subject in like manner to alteration by Special Resolution.

INDEMNITY

21. Every Director, Managing Director, Agent, Auditor, Secretary and other Officer for the time being of the Company shall be indemnified out of the Assets of the Company against any liability incurred by him in defending any proceedings, whether civil or criminal in which judgement is given in his favour or in which he is acquitted or is in connection with any application in which relief is granted to him by the Court.

ARBITRATION

22. If and whenever any dispute or difference shall arise between the Company and any of the members or their respective representatives touching upon the construction or meaning of any of the Articles herein contained or any act matter or thing made or done or omitted to be done or with regard to the rights or liabilities arising here under or arising out of the relation existing between the parties by reasons of these Articles or the Act, such differences shall (unless a sole arbitrator be agreed upon) forthwith be referred to the arbitration of three (3) arbitrators, one to be appointed by each party and the third to be appointed by the first two or, in the event of failure to agree within (Cap. 15) or any then existing statutory modifications or re-enactment thereof shall apply.

TANZANIA



Certificate of Incorporation

Section 15

No 63428

I HEREBY CERTIFY THAT

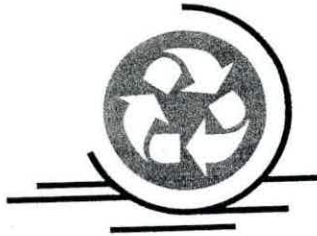
MAKONDE CEMENT LIIMITED =====

is this day incorporated under the Companies Act 2002 and that the Company is Limited

Given under my hand at Dar es salaam

this 12TH day of **DECEMBER**
TWO THOUSAND AND SEVEN

[Signature]
Asst Registrar of Companies



*Promoting
Environmental, Social &
Economic Sustainable
Development*

MAKONDE CEMENT LIMITED

**P. O. Box 767
Mtwara
TANZANIA**

**Phone/Fax: +255 23 233 4396
Mobile: +255 783 669 644
+255 783 669 645**

01 October 2008.

**Director of Surveys
P.O. Box 9210
Dar es Salaam**

Attention: Mr. Zablon Y. Masele

Dear Sir

**Re: Application for 99-Year Lease of Property in Ndumbwe Village area – Mtwara Region
For the setting up of a Cement Processing Plant.**

We refer to our meeting of 30th September in Mtwara with the District Executive Officer, Mtwara concerning the above we wish to formally apply for land lease to enable us to convert our Prospecting License and Mining Licenses into surveyed land to enable our company to set up our proposed lime quarry and cement factory.

We have undertaken our Bankable Feasibility Study (BFS) and are nearing the completion of all our investigation work required under this BFS. The outstanding issues are our final EIA approval as well as our geological survey and the land lease in order that we may finalise our Mining License and then begin to construct our plant in the Ndumbwe Village area.

The area we wish to lease from the Tanzanian Government on a 99-year lease is per attached survey map and the co-ordinates are as follows:

A	606400	887700
B	607900	887700
C	607900	886700
D	607000	886700
E	607000	886655 – following the road to co-ordinate F
F	606400	886685

Note: Both co-ordinates E & F are adjacent to the existing main road from Mikindani to Lindi and would extend up to the road boundary.

We wish to formally apply for this land as per co-ordinates given above and attached map. We would be grateful if you could advise us on the next step forward and procedures in order that we can arrange to have this property surveyed and registered with Tanzanian Government Lands Department as soon as possible in order to assist us in trying to meet our deadline start date of 15th November 2008.

This project is a Tz 42 billion Shilling (US\$ 35 million) investment which will enable the development of Mtwara and the southern Region of Tanzania to be accelerated through the supply of cost effective cement to meet the growing demands in this region. In addition, it will bring employment to just under

200 persons as well as create downstream employment and opportunities for over 200 persons and will bring additional wealth and taxes into this area of Mtwara and Tanzanian Government.
Your support for this important project would be highly appreciated

Should you require any further information please do not hesitate to contact the undersigned or Mr. R. Vohora on + 255 784 452 202

Thanking you in advance

Yours faithfully



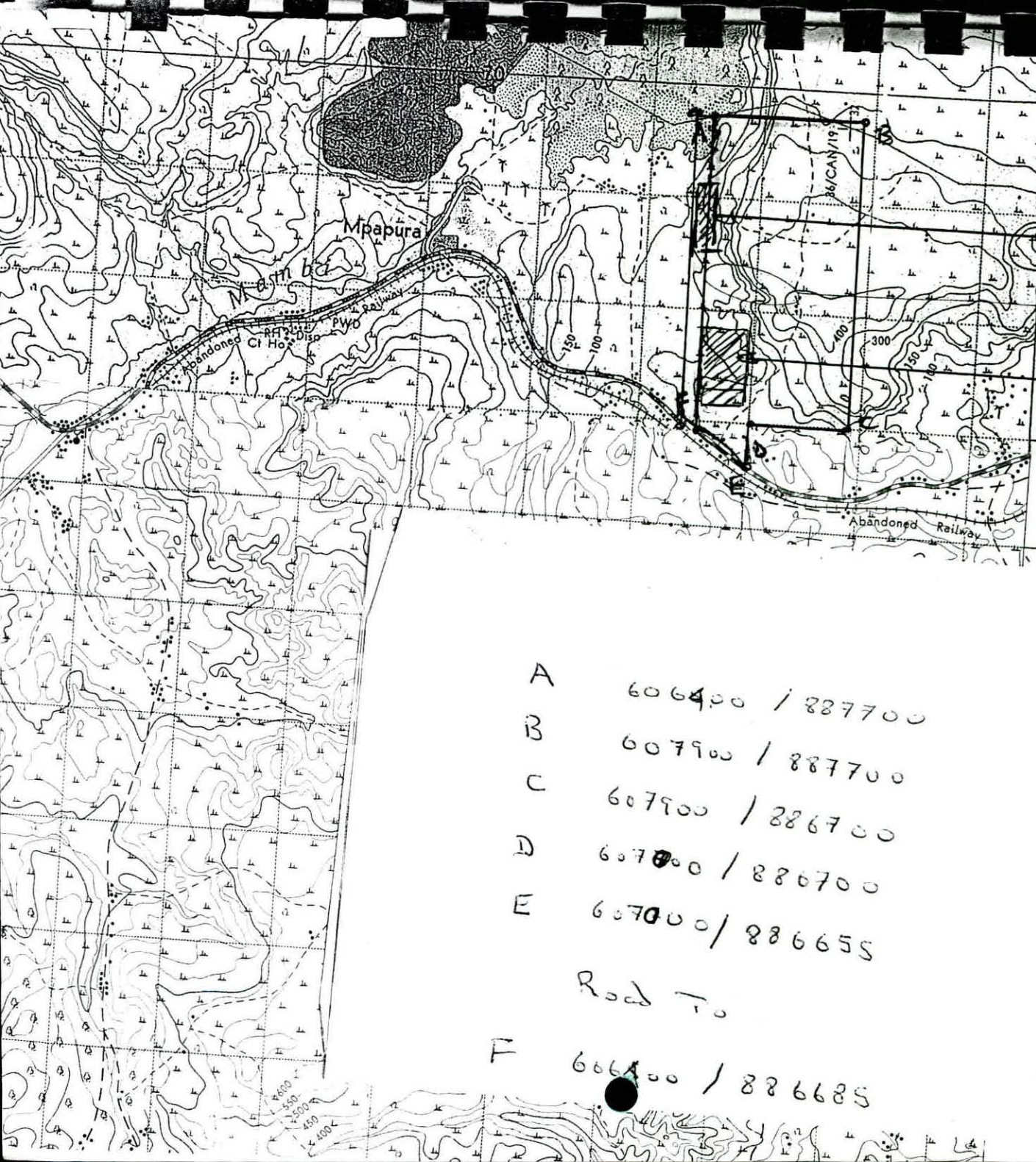
Neil Garden
Consultant/Director
Makonde Cement Ltd
Ph + 255 783 669 644

Copies to:

District Executive Director
P.O. Box 528
Mtwara

District Land Officer
P.O. Box 528
Mtwara

Village Chairman
Ndumbwe Village
P.O. Box 528
Mtwara



8870
8869
8868
8867
10°13'
8866

Proposed Factory
SITE 1

↑ Mine Direction
Mine Starts
HERE

Proposed Factory
SITE 2
Referred.

2512
- Sand &
Silt
- Clay on Site

- A 606400 / 887700
- B 607900 / 887700
- C 607900 / 886700
- D 607000 / 886700
- E 607000 / 886655
- Road To
- F 606400 / 886685

± 4.5 km²



MAKONDE CEMENT LIMITED

**P. O. Box 23418
Dar es Salaam
TANZANIA**

**Phone: +255 22 266 6617
Fax: +255 22 266 7148
Mobile: +255 76 294 2346**

UPDATE & PRESENT STATUS OF CEMENT PROJECT NOVEMBER 2008.

COMPANY & PROJECT DETAILS

- **Company Details**
 - Company formed & registered on 12th December 2007 – coy registration # 63428
 - Company TRA & VAT registered and compliant
 - Company Auditors – PKF, Dar es Salaam
 - TIC application will be submitted by end November 2008 for approval.
- **Project Details**
 - The cement project BFS is 98% complete and the following are outstanding and scheduled for completion by end December 2008.
 - The project is due for commencement 01 February 2009.
 - The project is due for completion 01 May 2010.

Outstanding Items on the project.

- **EIA**
 - final visit to site by Govt officials from NEMC – due on site by 01 December 2008 and then a sign off of our EIA within 2-3 weeks from that date – expected by mid/end December 2008.
- **Geological Resource Survey**
 - To prove resource – qualified and appointed geologist consultants are carrying this out, namely SRK from Dar es Salaam.
 - Final drilling to take place in early December 2008, when drilling equip is available.
 - Inferred resource given by SRK on initial scoping in July & September 2008, is between 30-50 m tonnes
 - Makonde Cement Ltd project only requires 5 million tonnes of lime deposits for a 20-year life of the 400 t/day plant.
- **Land acquisition**
 - This has to be finally surveyed and registered in Surveys and Lands Dept in Mtwara and Dar es Salaam
- **Final issue of Mining Licence**
 - Submission of ML – Mid December 2008 and approval expected by end January 2009.

- Approval expected in December 2008.
 - **Compensation**
 - Factory property area - when survey finalised by Govt Surveyors and compensation agreed upon by Govt.
 - Mining area - this is finalised awaiting issue of Mining License.
 - **Commencement of Construction Phase**
 - Construction is expected to commence
 - Work on site – February /March 2009
 - Ordering of plant & equipment from Movers India – orders expected to be placed by mid February 2009.
 - Plant delivery anticipated between October 2009 and January 2010.
 - **Completion of works and beginning of Commissioning and Testing**
 - Final handover and commissioning and testing of plant is expected to commence by February 2010
 - Plant is expected to be running at full capacity by end April/May 2010.
- **Value as the project**
 - See attached financials and quotations
- **Plant & Equipment “TIC Duty Free” requirements.**
 - Main Factory and Process & Packaging Plant - See attached schedule of Plant & Equipment from Movers India – List 1.
 - Quarry & Other Equipment Vehicles & Aircraft - See separate list of additional equipment required for this contract – List 2.
 - Office and Laboratory Equipment – List 3.
 - Miscellaneous Items not covered above – List 4.

NCG
November 2008



National Bank of Commerce Limited

Head of Corporate Banking

P. O. Box 1863, Dar es Salaam, Tanzania

Tel: +255 (0) 22 211 1970

Fax: +255 (0) 22 213 0596

Swift address: NLCBTZTX

e-mail: corpbanking@nbctz.com

www.nbctz.com

December 2, 2008

Bertram Eyakuze,
Director
Serengeti Advisers Limited
Dar es Salaam.

Dear Sir:

RE: EXPRESSION OF INTEREST TO TAKE PART IN FINANCING CONSTRUCTION AND INSTALLATION OF CEMENT PLANT IN MTWARA

Reference is made to the Information Memorandum relating to the proposed financing of Makonde Cement Ltd.

Having reviewed the information memorandum we are pleased to submit our indicative term sheet that will form the basis for future discussions on the proposal.

The following are pre-conditions for the Bank to proceed to the next level of discussions

- i. Availability of equity investors to bring the owner's equity to the proposed ratio.
- ii. Availability of all necessary permits from relevant authorities.

Please note that the attached are indicative terms and conditions that may be available to a facility of the nature indicated your information memorandum, and should not at this stage, be misconstrued to mean an offer or commitment on the part of National Bank of Commerce Limited nor any of its officers to provide these facilities.

Yours faithfully,
NBC LIMITED

Cassim Zacharia
Manager – Corporate Business Centre

National Bank of Commerce Limited Reg. No. 32700

DIRECTORS: F J DU TOIT** (Non-Executive), Dr M J ASSAD* (Non-Executive), A R MPUNGWE* (Non Executive), A. V DE LA RUE**** (Non- Executive) E B J LAURENTINO*** (Non-Executive) J.J GROBLER** (Non Executive), C P DE VRIES** (Managing/Executive), J P VERMAAS** (Executive), A.P VAN JAARSVELD** (Executive), SECRETARY: A R WOISO*

(* TANZANIAN, ** SOUTH AFRICAN, ***BRAZILIAN, ****BRITISH).

INDICATIVE TERM SHEET FOR A TERM LOAN FACILITY

- Borrower:** Makonde Cement Limited.
- Lender:** National Bank of Commerce Limited
- Facility:** Term Loan for a period of 7 years including a grace period of 18 months. Capital to be repaid in 66 equal monthly installments commencing 18 months after the first draw down.
- Purpose:** To part finance construction and installation of the proposed cement plant in Mtwara.
- Amount:** USD 18,657,037.00 equivalent in Tanzanian Shillings
- Draw downs:** Draw down and repayment of the term loan shall be as follow:
(a) Approved amount has to be drawn within 18 months from the first draw down date.
(b) Draw downs will be in multiple drawings; and any requests must be in writing from the borrower.
- Currency:** Tanzanian shillings: (unless it is proven that, the company will receive some of its sales proceeds in FOREX; part of the facility can be advanced in USD)
- Maximum Tenor:** 7 years, the tenor is to be calculated from the date of the first drawdown.
- Moratorium:** An 18 month moratorium will apply on principal repayments. This moratorium period will be counted from the date of the first drawdown.
- Repayments:** Principal repayments shall be repaid in 66 months after 18 months of grace period. During grace period only interest will be charged on the outstanding balance.
- Interest Rate:** The facilities shall bear the rate of interest of NBC TZS Base i.e. 14% p.a that will be charged every month on the outstanding amount. The bank reserves the right to change this rate any time and the client will be notified on this change.
- Default Interest:** In the event that the repayments are in default, an additional charge of 5% per annum will be levied on the defaulted portion in addition to the agreed interest rate
- Arrangement Fee:** 1.5%
- Security:** To be agreed but may include:
1. Landed properties
2. Debenture Charge over the equipment being financed.
3. Guarantees

Other Conditions: To include but not limited to:

The term sheet described herein is intended for discussion purposes only and is neither a commitment nor an offer to commit to any transaction or financing by NBC. The issuance of any Offer or Commitment Letter will be subject to satisfactory due diligence of the Borrower and receipt of a favorable legal opinion from NBC's legal counsel. The following terms and conditions are subject to modifications at the discretion of NBC.

1. At least 80% of the company sales proceed to be routed through NBC.
2. All FX pertaining to the Loan proceeds to be done with NBC.
3. The borrower must insure through NBC Ltd Insurance Unit
4. Any other conditions to be agreed upon.

The term sheet described herein is intended for discussion purposes only and is neither a commitment nor an offer to commit to any transaction or financing by NBC. The issuance of any Offer or Commitment Letter will be subject to satisfactory due diligence of the Borrower and receipt of a favorable legal opinion from NBC's legal counsel. The following terms and conditions are subject to modifications at the discretion of NBC.

Project Appraisal and Development
Financial Proposal

Clients Name:

MAKONDE CEMENT Ltd
Cement Plant - Tanzania

Address:

P O Box 767, Mtwara, Tanzania

C O N T E N T S

- (a) Input Sheet(INPUT)
- (b) Financing Plan(TOTCOS)
- (c) Profit & Loss Statement(PAL)
- (d) Cash Flow(CAF)
- (e) Breakeven Point(BEP)
- (f) Balance Sheet(BAL)
- (g) Ratios(RATIO)
- (h) Internal Rate of Return(IRR)

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MAKONDE CEMENT Ltd
Cement Plant - Tanzania

Mtwara Cement Ltd - 400 t / day Cement plant

Page 2

July 08

5 YEAR FINANCE PLAN WITH ONE YEAR MORITORIUM
US DOLLARS

Depreciation Rates

Buildings	0.05
Machinery & equipment	0.10
Office equipment	0.10
Vehicle	0.20
Others	-

Loan Sevice

Loan Amount	18,657,037.14	
Interest Per Annum in decimal	0.10	
Repayment Period	5.00	4.00 Repayment 4 years - 5 years interest

Tax

Tax rate in decimal	0.30
---------------------	------

Inflation

Opt'ing Expense increase by (in decimal)	0.05
Sales Price Increase (in whole nos.)	7.500
Raw material price increase	0.075

Inventory and Credit

Days of stocking Raw Materials	10.00
Days of Work in Progress	1.00
Days finished goods are stored	5.00
Credit term given to customers(Days)	15.00
Credit term given by suppliers	15.00

Dividends

0.25

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MAKONDE CEMENT Ltd	PRODUCTION COST ASSUMPTIONS FOR PAGE 3				
	Lime	Clay	Additive	Coke breeze	Gypsum
Costs of raw materials					
Factor	133%	18%	2%	18%	5%
Costs/ton	3.00	5.00	150.00	195.00	75.00
T.o year 1 - TONNES	124,100	22338	1,862	22,338	6,205 T
Costs	493,297.50	111,690.00	279,225.00	4,355,910.00	465,375.00 #
Total costs of raw material - year 1	5,705,497.50	2%	5%	76%	8% C
Total cost/ton	45.98				
Costs t.o - years 2 onwards - TONNES / Year	131,400	23,652	1,871	23,652	6,570 T
Total costs	522,315.00	118,260.00	295,650.00	4,612,140.00	492,750.00 #
Total costs of raw material	6,041,115.00				
Total cost/ton - year 2 onwards	45.98				

POWER REQUIREMENTS

Kw per tonne	110.00
tonnes/day	400.00
hours/day	24.00
days/year	310.00
total kwh requirements	13,640,000.00
Cost / KwH - per Umojo & Tanesco quotation	0.10
Total power costs	1,364,000.00

ASSUMPTIONS TO FINANCIAL CALCULATIONS

Currency: >> US DOLLARS

Project Cost Categories	Investor deposit		Invetment loan		Totals
	Equity	Subsidy	New Loan	Overdraft	
	0.0%		80.0%		100%
A. Fixed Investments	US\$		US\$		US\$
1 Movers comp plant CIF & incl Commissioning	2,295,910.00	-	13,009,590.00	-	15,305,400.00
2 Civil works -	1,837,350.00	-	4,287,150.00	-	6,124,500.00
3 Housing & infrastructure	270,000.00	-	180,000.00	-	450,000.00
4 Shareholders Contribution see Fixed Invest. Resourc	4,365,400.00	-	-	-	4,365,400.00
5 Vehicles & Office Equipment	33,000.00	-	132,000.00	-	165,000.00
6 Local costs of Installation, Tport, Labour etc.	1,416,750.00	-	-	-	1,416,750.00
B. Pre-Operating Expenses	100%		0%		100%
1 Feasibility Study Preparation & compensation	388,000.00	-	-	-	388,000.00
2 Licenses & Registration	15,000.00	-	-	-	15,000.00
3 Training	75,000.00	-	-	-	75,000.00
5 Trial Production	100,000.00	-	-	-	100,000.00
6 Interest during Construction period	1,942,641.57	-	-	-	1,942,641.57
7 Others - Consultancy design and supervision of project	551,205.06	-	-	-	551,205.06
C. Working Capital	30%		70%		100%
1 Raw Materials	91,868.16	-	121,025.70	-	172,893.86
2 Packing Materials & Stores & consumables (1375)	9,307.50	-	21,717.50	-	31,025.00
3 Salaries & wages	31,025.00	-	-	-	31,025.00
4 WIP	27,076.36	-	63,178.18	-	90,254.55
5 Finished Goods	90,254.55	-	210,593.94	-	300,848.48
6 Receivable	270,763.64	-	631,781.82	-	902,545.45

Sell US\$

Production in US Selling & Costs

160.00

Capacity at 100% Economic Capacity - ton	1.00 >	146,000.00			
	Year 1	Year 2	Year 3	Year 4	Year 5
1 Production Capacity Used(%)	85%	90%	90%	90%	90%
2 Production Volume (Unit) Tonnes	124,100.00	131,400.00	131,400.00	131,400.00	131,400.00
3 Ave Selling Price Per Unit	160.00				
A.Sales	19,856,000.00	22,600,800.00	24,295,860.00	26,118,049.50	28,076,903.21

Cost Assumptions (per annum)

B. Direct Costs - tonne			Drill & blast costs	3.00	2.50
Drill & Blast + Quarry site Royalties	493,297.50				0.50
Raw Material costs	5,705,497.50	6,198,795.00			
C. Production Overheads					
-Salaries/Wages & Ins & T/port etc.	248,200.00			Cost per tonne	2.00
- Packing	62,050.00			Cost per tonne	0.50
Insurance/rent/housing/	49,640.00				
Elect / water / advertising/phones /office exes/etc	1,418,560.00	1,778,450.00			
D. Administrative Expenses					
-Salaries & Management Contract - ex Movers	434,350.00	incl		Movers Management contract	
-Other Staff Benefits	24,000.00	inc		Cost per tonne	3.50
Office Supplies	12,000.00	inc			
ommunication	12,000.00	inc			
Transport(fuel, trav, rep)	36,000.00	inc			
-Rent	24,000.00	inc		Months	12
-Bank Charges	3,000.00	inc			250.00
-Others (Maintenance-Bdgs)	18,000.00		563,350.00		1,500.00
E. Selling Expenses				Production - t	124,100.00
-Salaries	62,050.00	inc		Cost/t	0.50
-Transport	12,000.00	inc			1,000.00
-Communications etc	1,800.00	inc			150.00
-Others sales promotion etc	6,000.00		81,850.00		500.00
TOTAL	8,622,445.00	8,622,445.00			

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MAKONDE CEMENT Ltd
Cement Plant - Tanzania

TOTAL PROJECT COST

Page 4

Unless specified, all Figures are in

US DOLLARS

Categories	US DOLLARS				TOTAL
	Equity	Subsidies	Loan	Overdraft	
A. Fixed Investments					
1 Movers comp plant CIF & incl Commissioning	2,295,810.00	-	13,009,590.00	-	15,305,400.00
2 Civil works -	1,837,350.00	-	4,287,150.00	-	6,124,500.00
3 Housing & infrastructure	270,000.00	-	180,000.00	-	450,000.00
4 Shareholders Contribution see Fixed Invest. Resource	4,365,400.00	-	-	-	4,365,400.00
5 Vehicles & Office Equipment	33,000.00	-	132,000.00	-	165,000.00
6 Local costs of Installation, Tport, Labour etc.	1,416,750.00	-	-	-	1,416,750.00
Sub-Total	10,218,310.00	-	17,608,740.00	-	27,827,050.00
	2,295,810.00	Movers Plant	13,009,590.00		15,305,400.00
	12%		40%		55%
B. Pre-Operating Expenses					
1 Feasibility Study Preparation & compensation	388,000.00	-	-	-	388,000.00
2 Licenses & Registration	15,000.00	-	-	-	15,000.00
3 Training	75,000.00	-	-	-	75,000.00
5 Trial Production	100,000.00	-	-	-	100,000.00
6 Interest during Construction period	1,942,641.57	-	-	-	1,942,641.57
7 Others - Consultancy design and supervision of project	551,205.00	-	-	-	551,205.00
Sub-Total	3,071,846.57	-	-	-	3,071,846.57
Total Fixed Investments	13,290,156.57	-	17,608,740.00	-	30,898,896.57
C. Working Capital					
1 Raw Materials	51,868.16	-	121,025.70	-	172,893.86
2 Packing Materials & Stores & consumables (1375)	9,307.50	-	21,717.50	-	31,025.00
3 Salaries & wages	31,025.00	-	-	-	31,025.00
4 WIP	27,076.36	-	63,178.18	-	90,254.55
5 Finished Goods	90,254.55	-	210,593.94	-	300,848.48
6 Receivable	270,763.64	-	631,781.82	-	902,545.45
Sub-Total	480,295.20	-	1,048,297.14	-	1,528,592.35
TOTAL PROJECT COST	13,770,451.77	-	18,657,037.14	-	32,427,488.92
DEBT EQUITY RATIO (%)	42.47%		57.53%		100%

VALUE OF RESOURCE ASSETS

Tonnes

A) - RESOURCE - LIME DEPOSIT APPROXIMATELY

4,365,400.00

Inferred deposit closer to 6 million tonnes of high concentrate lime

Value of lime / tonne - US\$

1.00

Value of resource covered under EPL -

\$ 4,365,400.00

Covered under Prospecting Licence No. 4338/2007

Signed by the Minister of Energy & Minerals on 23rd April 2007

ASSET TO EQUITY VALUE

EQUITY VALUE

9405051.77

ASSET VALUE

4365400.00

ASSET TO EQUITY VALUE

46.42%

RESOURCE SIZE INCREASED WHICH CHANGES EQUITY VALUE SLIGHTLY UPWARDS

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MAKONDE CEMENT Ltd
Cement Plant - Tanzania

PROJECTED INCOME STATEMENT

Page 5

Unless specified, all Figures are in

US DOLLARS

Production Capacity at 100%	146,000.00				
	Year 1	Year 2	Year 3	Year 4	Year 5
1 Production Capacity Used (%)	0.85	0.90	0.90	0.90	0.90
2 Production Volume (Units)	124,100.00	131,400.00	131,400.00	131,400.00	131,400.00
4 Sales Volume (Units)	122,400.00	131,275.00	131,400.00	131,400.00	131,400.00
4 Selling Price Per Unit	160.00	172.00	184.90	198.77	213.68
A.Sales	19,584,000.00	22,579,300.00	24,295,860.00	26,118,049.50	28,076,903.21
B. Direct Costs					
Drill & Blast + Quarry site Royalties	493,297.50	522,315.00	561,488.63	603,600.27	648,870.29
Raw Material costs	5,705,497.50	6,041,115.00	6,494,198.63	6,981,263.52	7,504,858.29
C. Production Overheads					
-Salaries/Wages	248,200.00	260,610.00	273,640.50	287,322.53	301,688.65
-Transport	62,050.00	65,152.50	68,410.13	71,830.63	75,422.16
-Others 1	49,640.00	52,560.00	52,560.00	52,560.00	52,560.00
-Others	1,418,560.00	1,489,488.00	1,563,962.40	1,642,160.52	1,724,268.55
Sub-Total	7,977,245.00	8,431,240.50	9,014,260.28	9,638,737.47	10,307,667.94
C. Gross Profit	11,606,755.00	14,148,059.50	15,281,599.73	16,479,312.03	17,769,235.27
D. Administrative Expenses					
-Salaries	434,350.00	456,067.50	478,870.88	502,814.42	527,955.14
-Other Staff Benefits	24,000.00	25,200.00	26,460.00	27,783.00	29,172.15
-Office Supplies	12,000.00	12,600.00	13,230.00	13,891.50	14,586.08
-Communication	12,000.00	12,600.00	13,230.00	13,891.50	14,586.08
-Transport	36,000.00	37,800.00	39,690.00	41,674.50	43,758.23
-Rent	24,000.00	25,200.00	26,460.00	27,783.00	29,172.15
-Bank Charges	3,000.00	3,150.00	3,307.50	3,472.88	3,646.52
-Others (Maintenance - Buildings)	18,000.00	18,900.00	19,845.00	20,837.25	21,879.11
E. Selling Expenses					
-Salaries	62,050.00	65,152.50	68,410.13	71,830.63	75,422.16
-Transport	12,000.00	12,600.00	13,230.00	13,891.50	14,586.08
-Communications	1,800.00	1,890.00	1,984.50	2,083.73	2,187.91
-Others	6,000.00	6,300.00	6,615.00	6,945.75	7,293.04
Total Operating Expenses	645,200.00	677,460.00	711,333.00	746,899.65	784,244.63
E. Profit Before Depreciation & POE	10,961,555.00	13,470,599.50	14,570,266.73	15,732,412.38	16,984,990.64
Less: Depreciation & POE Amortization					
Annual Depreciation Costs	2,306,305.00	2,306,305.00	2,306,305.00	2,306,305.00	2,306,305.00
Annual POE Amortization	614,369.31	614,369.31	614,369.31	614,369.31	614,369.31
Total Depreciation & POE Amortization	2,920,674.31	2,920,674.31	2,920,674.31	2,920,674.31	2,920,674.31
E. Profit Before Interest Expenses	8,040,880.69	10,549,925.19	11,649,592.41	12,811,738.07	14,064,316.33
Less: Interest Expenses	1,865,703.71	1,865,703.71	1,463,699.04	1,021,493.89	535,068.23
F. Net Profit Before Tax	6,175,176.97	8,684,221.47	10,185,893.38	11,790,244.18	13,529,248.10
Less: Tax -	1,852,553.09	2,605,266.44	3,055,768.01	3,537,073.25	4,058,774.43
Net Profit After Tax	4,322,623.88	6,078,955.03	7,130,125.36	8,253,170.92	9,470,473.67
Dividends	-	1,519,738.76	1,782,531.34	2,063,292.73	2,367,618.42
H. Re-invested Profits	4,322,623.88	4,559,216.27	5,347,594.02	6,189,878.19	7,102,855.25

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BREAK EVEN POINT ANALYSIS

Unless specified, all Figures are in US DOLLARS

	Year 1	Year 2	Year 3	Year 4	Year 5
Total Cost Fixed & Variable B/E point	112.75	110.41	112.27	114.18	116.11
A. Fixed Costs					
1 Production Overheads Incl Depreciation	4,699,124.31	4,788,484.81	4,879,247.34	4,974,547.99	5,074,613.67
2 Administration Exes incl interest on loans	2,429,053.71	2,457,221.21	2,084,792.41	1,673,641.93	1,219,823.67
3 Fixed Selling Cost	645,200.00	677,460.00	711,333.00	746,899.65	784,244.63
Total Fixed Costs	7,773,378.03	7,923,166.03	7,675,372.75	7,395,089.57	7,078,681.98
B. Variable Costs					
Drill & Blast + Quarry site Royalties	493,297.50	522,315.00	561,488.63	603,600.27	648,870.29
Raw Material costs	5,705,497.50	6,041,115.00	6,494,198.63	6,981,263.52	7,504,858.29
Other Variable Selling Cost	19,800.00	20,790.00	21,829.50	22,920.98	24,067.02
Total Variable Costs	6,218,595.00	6,584,220.00	7,077,516.75	7,607,784.77	8,177,795.60
C. Production Volume (Units)	124,100.00	131,400.00	131,400.00	131,400.00	131,400.00
D. Variable Cost Per Unit	50.11	50.11	53.86	57.90	62.24
E. Selling Price Per Unit	160.00	172.00	184.90	198.77	213.68
F. Sales	19,584,000.00	22,579,300.00	24,295,860.00	26,118,049.50	28,076,903.21
G. Breakeven Point Analysis					
1 BEP (Units)	70,737.52	65,001.64	58,573.81	52,496.00	46,742.74
2 BEP (Production Capacity, %)	57.00	49.47	44.58	39.95	35.57
3 BEP Sales	11,318,003.25	11,180,282.61	10,830,297.61	10,434,497.74	9,987,757.88
4 BEP Selling Price	112.75	110.41	112.27	114.18	116.11
5 Margin of Safety	43.00	50.53	55.42	60.05	64.43

Fixed costs DIVIDE by Sales MINUS Variable Costs		58.2%	49.5%	44.6%	40.0%	35.6%
Break Even - Calculations						
Total Fixed Costs		7,773,378.03	7,923,166.03	7,675,372.75	7,395,089.57	7,078,681.98
Divide by F Sales less Variable costs						
F. Sales		19,584,000.00	22,579,300.00	24,295,860.00	26,118,049.50	28,076,903.21
Total Variable Costs		6,218,595.00	6,584,220.00	7,077,516.75	7,607,784.77	8,177,795.60
Total	O97-O92	13,365,405.00	15,995,080.00	17,218,343.25	18,510,264.73	19,899,107.61

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Cement Plant - Tanzania

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CASH FLOW PROJECTIONS

Unless specified, all Figures are in

US DOLLARS

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
A. Cash InFlows:						
1 Equity	13,770,451.77					
2 Subsidies	-					
3 Loan	18,657,037.14					
4 Payables	-	816,000.00	124,804.17	71,523.33	75,924.56	81,618.90
5 Profit Before Depreciation & Amortization		10,961,555.00	13,470,599.50	14,570,266.73	15,732,412.38	16,984,990.64
Total Cash InFlows	32,427,488.92	11,777,555.00	13,595,403.67	14,641,790.06	15,808,336.94	17,066,609.55
B. Cash OutFlows:						
1 Fixed Investments	30,898,896.57					
2 Stocks	1,293,648.48	(939,104.26)	20,177.58	25,911.99	27,754.54	29,730.24
3 Accounts Receivables	31,025.00	784,975.00	124,804.17	71,523.33	75,924.56	81,618.90
2 Taxes		1,852,553.09	2,605,266.44	3,055,768.01	3,537,073.25	4,058,774.43
Sub-Total	32,223,570.05	1,698,423.83	2,750,248.19	3,153,203.34	3,640,752.36	4,170,123.58
C. Net Cash Balance	203,918.86	10,079,131.17	10,845,155.48	11,488,586.72	12,167,584.58	12,896,485.97
D. Beginning Cash Balance	-					
Cash Balance before Repayment	203,918.86	10,079,131.17	10,845,155.48	11,488,586.72	12,167,584.58	12,896,485.97
F. Loan Repayments						
1 Interest on Overdraft	-					
2 Interest on Fixed Loans	-	1,865,703.71	1,865,703.71	1,463,699.04	1,021,493.89	535,068.23
3 Fixed Loan Principal Repayments	-		4,020,046.79	4,422,051.47	4,864,256.61	5,350,682.28
Remaining Loan	18,657,037.14	18,657,037.14	14,636,990.36	10,214,938.89	5,350,682.28	0.00
5 Overdraft Repayment	-					
6 Dividends	-			1,519,738.76	1,782,531.34	2,063,292.73
Cash Balance after Repayment	203,918.86	8,213,427.46	4,959,404.98	4,083,097.46	4,499,302.74	4,947,442.74

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Cement Plant - Tanzania

PROJECTED BALANCE SHEET

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	US DOLLARS					
	Unless specified, all Figures are in					
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
A. Assets:						
1. Current Assets						
Cash	203,918.86	8,213,427.46	4,959,404.98	4,083,097.46	4,499,302.74	4,947,442.74
Accounts Receivables	31,025.00	816,000.00	940,804.17	1,012,327.50	1,088,252.06	1,169,870.97
Inventories	1,293,648.48	354,544.22	374,721.80	400,633.79	428,388.33	458,118.58
Total Current Assets	1,528,592.35	9,383,971.68	6,274,930.94	5,496,058.75	6,015,943.14	6,575,432.28
2. Fixed Assets						
1 Movers comp plant CIF & incl Commiss	15,305,400.00					
2 Civil works -	6,124,500.00					
3 Housing & infrastructure	450,000.00					
4 Shareholders Contribution see Fixed In	4,365,400.00					
5 Vehicles & Office Equipment	165,000.00					
6 Local costs of Installation, Tport, Labou	1,416,750.00					
Total Fixed Assets	27,827,050.00	27,827,050.00	27,827,050.00	27,827,050.00	27,827,050.00	27,827,050.00
Less: Depreciation		2,306,305.00	4,612,610.00	6,918,915.00	9,225,220.00	11,531,525.00
Book Value of Fixed Assets	27,827,050.00	25,520,745.00	23,214,440.00	20,908,135.00	18,601,830.00	16,295,525.00
3. Intangible Assets						
Pre-Operational Expenses	3,071,846.57	3,071,846.57	3,071,846.57	3,071,846.57	3,071,846.57	3,071,846.57
Less: POE Amortization		614,369.31	1,228,738.63	1,843,107.94	2,457,477.26	3,071,846.57
Book Value of Intangible Assets	3,071,846.57	2,457,477.26	1,843,107.94	1,228,738.63	614,369.31	-
Total Assets	32,427,488.92	37,362,193.93	31,332,478.89	27,632,932.38	25,232,142.45	22,870,957.28
B. Liabilities						
1. Short Term Liabilities						
Accounts Payable	-	816,000.00	940,804.17	1,012,327.50	1,088,252.06	1,169,870.97
Dividends	-	-	1,519,738.76	1,782,531.34	2,063,292.73	2,367,618.42
2. Long Term Liabilities						
Overdraft	-	-	-	-	-	-
Fixed Capital Loans	18,657,037.14	18,657,037.14	14,636,990.36	10,214,938.89	5,350,682.28	0.00
Total Long Term Liabilities	18,657,037.14	18,657,037.14	14,636,990.36	10,214,938.89	5,350,682.28	0.00
Total Liabilities	18,657,037.14	19,473,037.14	17,097,533.28	13,009,797.73	8,502,227.07	3,537,489.38
3. Equity						
Owner's Capital	13,770,451.77	13,770,451.77	13,770,451.77	13,770,451.77	13,770,451.77	13,770,451.77
Retained Earnings	-	-	4,322,623.88	8,881,840.15	14,229,434.17	20,419,312.37
Current Year's Earnings		4,322,623.88	4,559,216.27	5,347,594.02	6,189,878.19	7,102,855.25
Total Equity	13,770,451.77	18,093,075.65	22,652,291.93	27,999,885.95	34,189,764.14	41,292,619.39
Total Equity & Liability	32,427,488.92	37,566,112.80	39,749,825.21	41,009,683.68	42,691,991.21	44,830,108.78
		(203,918.86)	(8,417,346.32)	(13,376,751.30)	(17,459,848.76)	(21,959,151.50)
Receivables		31,025.00	940,804.17	1,012,327.50	1,088,252.06	1,169,870.97
Payables		816,000.00	940,804.17	1,012,327.50	1,088,252.06	1,169,870.97

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Internal rate of return

Net present value

CALCULATION OF IRR & NPV

YEAR	CASH FLOWS	DF	PV
-	(32,427,488.92)	1.00	(32,427,488.92)
1.00	10,079,131.17	1.00	10,057,405.83
2.00	10,845,155.48	1.00	10,798,452.88
3.00	11,488,586.72	0.99	11,414,456.55
4.00	12,167,584.58	0.99	12,063,015.45
5.00	12,896,485.97	0.99	12,758,093.41
6.00	12,896,485.97	0.99	12,730,593.62
7.00	12,896,485.97	0.99	12,703,153.11
8.00	12,896,485.97	0.98	12,675,771.74
9.00	12,896,485.97	0.98	12,648,449.40
10.00	12,896,485.97	0.98	12,621,185.94

25,049,455.01

#####

NET PRESENT VALUE AT IRR 24,663,935.21

NET PRESENT VALUE AT INTEREST RATE OF LOAN 0.10 \$12,425,352.56

INTERNAL RATE OF RETURN **21.6%**

Decision:
Z Greater than 2.90 then client is safe
Z Less than 1.23 then client is bankrupt

Z **4.79**

Score = X1(z)+X2(z)+X3(z)+X4(z)+X5(z)

X1 =	working capital	1,528,592.35	0.05
	<u>Total Assets</u>	32,427,488.92	
X2 =	Retained income	4,322,623.88	0.13
	<u>Total assets</u>	32,427,488.92	
X3 =	Earnings before interest & taxes	8,040,880.69	0.25
	<u>Total assets</u>	32,427,488.92	
X4 =	Networth	32,427,488.92	3.76
	<u>Total liabilities</u>	8,622,445.00	
X5 =	Sales	19,584,000.00	0.60
	<u>Total Assets</u>	32,427,488.92	4.79

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Decision:

RATIO ANALYSIS

		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Profitability Ratios						
1	Gross Profit Margin = $\frac{\text{Gross Profit}}{\text{Sales}}$	0.59	0.63	0.63	0.63	0.63
2	Net Profit Margin = $\frac{\text{Net Profit Before Interest and Tax}}{\text{Sales}}$	0.41	0.47	0.48	0.49	0.50
Cash Flow Ratios						
1	Debt Service Coverage Ratio = $\frac{\text{Cash Flow}}{\text{Interest and Principal Repayment}}$	5.40	1.84	1.95		
Balance Sheet Ratios						
1	Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$	3.50	0.92	0.80	0.86	0.93
2	Quick Ratio = $\frac{\text{Current Assets MINUS Stocks}}{\text{Current Liabilities}}$	11.07	6.27	5.03	5.13	5.23
	Asset Turnover Ratio = $\frac{\text{Sales}}{\text{Fixed Assets}}$	0.77	0.97	1.16	1.40	1.72
4	Return on Investment (ROI) = $\frac{\text{Profit}}{\text{Total Investment}}$	0.22	0.34	0.42	0.51	0.61
5	Long Term Debt Equity Ratio = $\frac{\text{Long Term Debt}}{\text{Equity}}$	1.03	0.65	0.36	0.16	0.00

STRICTLY CONFIDENTIAL

Information Memorandum
relating to the proposed financing of
Makonde Cement Limited

AUGUST 2008



Important Notice

This Information Memorandum has been prepared by Serengeti Advisers Limited ("SAL") on behalf of Makonde Cement Limited ("MCL"). It is being made available by to a limited number of persons (the "Recipients") for the sole purpose of providing information to assist such Recipients in deciding whether they wish to proceed with a further investigation of MCL.

The information in this Information Memorandum has been compiled by MCL and SAL and has not been independently verified by them or any other person. Neither MCL, SAL nor any of their respective directors, officers, agents, employees or advisors makes any representation or warranty, express or implied, or shall have any responsibility or liability whatsoever in respect of the accuracy or completeness of the Information Memorandum, or its contents, or any oral or written, communication in connection with the Transaction. In particular, but without limitation, no representation or warranty is given as to the achievement or reasonableness of, and no reliance should be placed on, any projections, targets, estimates or forecasts with respect to MCL's performance contained in this Information Memorandum.

This Information Memorandum does not purport to be comprehensive nor to contain all of the information that a prospective debt or equity investor may need. In all cases, prospective debt or equity investors should conduct their own investigations and analysis of the information contained in this Information Memorandum in order to evaluate MCL.

This Information Memorandum is not intended to form the basis of any investment decision. It does not constitute an offer or invitation for the sale of MCL, nor shall it or any other written or oral information made available to the Recipient hereof or its advisors constitute the basis of any contract.

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SAL is acting exclusively for MCL and no one else in connection with this transaction, and will not be responsible for providing the protections normally afforded to clients of SAL or for providing advice to any other person in respect of the Transaction.

Neither MCL nor SAL shall be liable for the fees and expenses incurred by any prospective investor or purchaser or its advisers in relation to the Transaction.

Enquiries should be addressed to:

Bertram Eyakuze

Director
Serengeti Advisers Limited
Dar es Salaam
Tanzania

Direct telephone: +255 (0)22 277 2024
Cell phone: +255 (0)75 478 4455
Facsimile: +255 (0)22 277 2023
Email: bertram@serengetiadvisers.com

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1. Introduction
2. Envisaged funding process
3. Opportunity and industry overview
4. Tanzanian legal and regulatory considerations
5. Pro forma financial information
6. Risk factors
7. Appendices

1. Introduction

Background to carry out a feasibility study on the proposed establishment of a cement plant in Tanzania was initiated by Makonde Cement Limited (MCL), a company that has been registered and incorporated for the purpose of implementing this project.

Prior to making any decision to set up the cement plant at Mtwara in Tanzania, careful investigations with regard to the present and future market, the technical feasibility and financial economical viability of the project had to be carried out. Results of the assessment including key deliverables following the completion of the Mtwara Corridor Spatial Development Initiative study, from which certain projects have already commenced, are listed below:

- Road from Mtwara to Songea & Mbamba Bay on Lake Nyasa (Lake Malawi)
- Unity Bridge 1 and 2 on Ruvuma River between Tanzania and Mozambique (exports to Mozambique)
- Ruvuma Ferry up-grade – this will allow more access by traders and tourists to and from Mozambique to operate more freely.
- Mtwara Energy Project – powering all of Lindi and Mtwara regions
- Major mineral exploration in the Ruvuma Region (uranium, coal and gold)
- Additional projects effecting and contributing to development include:
 - Dar es Salaam to Mtwara tarmac road, currently nearing completion
 - Upgrade of Mtwara Airport
 - Expansion of the Mtwara deep water port by Tanzania Ports Authority
 - Exclusive tourist hotels and casinos
 - National Parks Marine Park development to make the region very unique and exclusive, specifically regarding the coral and fish life in this pristine area in the Marine Park.

All aspects related to this project are contained in this feasibility study, conducted by Neil Garden of MANT Consultants, a firm with a wealth of relevant experience and knowledge.

The results of the feasibility study prove that the project is technically feasible in Tanzania, and that the existing market will continue to exist and grow in future, hence that the project is financially and economically viable. Over and above all this, the study proves the necessity and importance of the establishment of another cement plant in Tanzania especially in the southern part where major development is earmarked to take place over the next 5-8 years driven by gas and oil exploration.

Careful consideration was given to obtain a plant with the following features: small, technically state-of-the-art, requiring lower initial investment, ability to be set up in an underdeveloped rural area, featuring simple technology that requires minimal maintenance but gives higher yields that can provide proven quicker realization of the returns on capital invested.

Movers (India) Ltd., (a specialist company in India) was the vendor identified who is presently actively involved in the design, manufacture and construction of small cement plants that are technically competitive and suitable for the project in Tanzania. Movers already have supplied and installed similar successful plants in Kenya and Malawi and presently working on additional plants in Botswana and Malawi.

The purpose of this document is to facilitate an appraisal of Makonde Cement by potential debt providers and equity investors. These documents detail technical, marketing and financial aspects for the proposed cement plant that is to be located in Mtwara region.

2. Envisaged funding process

2.1. Stage 1: Non-binding bids

The first stage of the process will involve review by potential investors of the Information Memorandum and preparation and submission of non-binding bids in respect of MCL.

Non-binding indicative offers should include the following:

- an indication of the price, expressed in USD, which you would be prepared to invest in MCL;
- details of your proposed financing of the Transaction, including the structure and sources of financing and any conditions imposed on you in respect of such financing;
- the assumptions on which you have based the price;
- details of any conditions to which any final offer would be subject (including essential shareholder, board, regulatory or other approvals required by you) together with your proposed plan and timing for securing such approvals;
- any other timetable issues;
- a description of the strategy you would follow to develop MCL;
- what further information you require and details of any specific due diligence you would need to undertake to finalise your offer;
- any other information which may be pertinent to MCL's evaluation of your non-binding bid, for example, a basic description of your business activities, historical financial information etc.;
- the name and telephone number of the person within your organisation whom we may contact if we have questions about your indicative offer; and the names of any external advisors you have engaged or intend to engage.

MCL will consider all non-binding bids received in conformity with the above procedures. At MCL's discretion, one or more parties ("Selected Investors") may be invited to participate in the next stage of the sales process, details of which are provided in section 2.2 below.

Your non-binding bid should be emailed by no later than 17h00 (Tanzanian time) on Friday, 12 September 2008 to Bertram Eyakuze at the following address:

Serengeti Advisers Limited
Dar es Salaam
Tanzania

Direct telephone: +255 (0)22 277 2024
Cell phone: +255 (0)75 478 4455
Facsimile: +255 (0)22 277 2023
Email: bertram@serengetiadvisers.com

2.2. Stage 2: Due diligence review

Before submitting a final offer each Selected Investor will be offered the opportunity to conduct a due diligence review incorporating:

- a data room visit;
- a site visit;
- a meeting with the project sponsors; and
- a discussion centering around the Sale Agreement as a result of due diligence.

The formal due diligence review will commence on Monday 6 October 2008 and conclude on Friday 17 October 2008. Each Selected Investor will have a maximum of 2 days in the Data Room and a day site visit at MCL's proposed site in Mtwara, with any extensions of time to any or all Selected Investors being at MCL's sole discretion.

Selected Investors must submit a list of persons who will represent the Selected Investor in the due diligence review and should note, in particular, the provisions of the Confidentiality Agreement which relate to disclosure to Representatives (as defined therein).

2.2.1. Data room

A data room containing legal, financial, commercial and other information will be open at the offices of MCL's lawyers in Dar es Salaam.

Each Selected Investor will be allowed a maximum of 2 days in the data room, with any extensions of time to any or all Selected Investors being at MCL's sole discretion. MCL would prefer a limit of four people per team in the data room at any one time, subject to negotiation. All data room material is indexed and the index will be available prior to the data room visit. Each visitor to the data room will be required to sign a set of data room rules before being granted access.

2.2.2. Site visits

Each Selected Investor will be allowed a maximum of one day for the site visit, with any extensions of time to any or all Selected Investors being at MCL's sole discretion. MCL would prefer a limit of four people per team on the site visit at any one time, subject to negotiation.

2.2.3. Meeting with Sponsors

There will be a presentation by MCL sponsors as part of the due diligence process, and any questions should be sent to Bertram Eyakuze at the address specified above, three working days in advance of the meeting.

2.3. Stage 3: Final binding bids

Selected Investors will be required to submit their final binding bids on 7 November 2008 to:

Bertram Eyakuze
Serengeti Advisers Limited
Dar es Salaam
Tanzania

Direct telephone: +255 (0)22 277 2024
Cell phone: +255 (0)75 478 4455
Facsimile: +255 (0)22 277 2023
Email: bertram@serengetiadvisers.com

Final binding bids should include the following:

- the amount, expressed in USD, which you are prepared to invest in MCL;
- confirmed details of your financing plan including the structure and sources of financing. To the extent to which the financial is provided by, or dependent on, third parties, please supply a copy of a binding letter of commitment from your financiers;
- the assumptions on which you have based the price;
- one copy of the Share Purchase Agreement and/or Loan Agreement, as applicable, in the form in which you would be prepared to sign it;
- the identity and ultimate ownership of the debt and/or equity provider(s);
- details of any conditions to which any final offer would be subject (including essential shareholder, board, regulatory authority approvals required by you), together with your plan and timing for securing such approvals;
- confirmation that your final offer is not conditional on any conditions other than those included in your Share Purchase and/or Loan Agreement;
- confirmation that your final offer is not conditional on any further due diligence;
- details of the approvals that have been obtained;
- any other information which may affect your ability to complete the Transaction or which may otherwise be relevant in the consideration of your offer;
- the amount of time you would need in order to complete the Transaction, taking into account all conditions and other approvals;
- a description of the strategy you would follow to develop MCL; and
- the name and telephone number of the person within your organisation whom we may contact if we have questions about your final binding bid.

2.4. Matters subsequent to submission of final binding bids

MCL will consider all final binding bids received in conformity with the above procedures. At MCL's discretion, one party (anticipated to provide/source debt as well as equity, and jointly termed "the Likely Investor") will be selected to participate in the final stage of the funding process.

MCL and the Likely Investor will execute the Share Purchase and/or Loan Agreement within one week of the Likely Investor being notified that he is such.

Completion will occur as soon as possible after the agreement date or after all regulatory authority approvals, if any, have been obtained, and in any event no later than 31 December 2008.

2.5. General

MCL and SAL reserve the right and without giving reasons, at any time, without notice to (i) vary or terminate the process as set out in this Information Memorandum in any way and with respect to any and/or all prospective purchaser(s); and (ii) terminate discussions with any or all prospective purchasers and/or to negotiate with any prospective purchaser on any terms and whether individually or simultaneously with any other prospective purchaser and/or enter into an agreement with any party with respect to a transaction involving or regarding MCL without notifying the other prospective purchasers and neither MCL nor SAL shall have any liability or other obligation whatsoever in respect thereof. Neither MCL nor SAL shall have an obligation to accept any offer.

Furthermore, at any time, MCL and SAL reserves the right and without giving reasons, at any time to reject any expressions of interest, proposals or requests for information by any prospective purchaser, and shall have no liability or other obligation in respect thereto.

3. Opportunity and Industry overview

MCL commissioned a detailed feasibility study to assess the financial viability on the setting up of a cement plant at Mtwara in Tanzania.

Careful consideration was given to obtain a plant that was small, technically state-of-the-art, requires lower initial investment, can be set up in an underdeveloped rural area, requires less maintenance but higher yield and can provide quicker realization of the returns on capital invested. Most if not all the cement plants in Tanzania and the region have the large cement plants that are very expensive, which for this project it was considered would not be viable. Movers (India) Ltd., (a company in India) was the vendor identified who is presently actively involved in the design, manufacture and construction of small cement plants that are technically competitive and suitable for this project in Tanzania.

The President of Moves (India) Ltd., was invited to Tanzania for detailed discussions on the possibility of building a plant in Mtwara. It was from these discussions and market analysis that an attempt to define the feasible plant size that could make the venture a worthwhile socio-economic undertaking was made. Consequently, Movers (India) Ltd., offered a quotation for a 400 tonnes per day (130,000 mt/year) cement plant.

The purpose of this study is to facilitate an appraisal by financial institutions and MCL. The document details all technical, marketing and financial aspects of a proposed cement plant, which is to be located in Mtwara.

THE PROJECT PROMOTERS

MCL has been incorporated for the purpose of implementing this project and has the following shareholding structure:

- 90% - Azania International S A, Panama
- 10% - M. Sinani, Tanzania

The promoters' equity contribution to the project consists of the limestone deposit and work done towards the feasibility study. The deposit is more than sufficient to cover the required 3.5 million tonnes of lime for 20 years production. Indeed, the initial draft survey conducted in mid-2008 by SRK who are undertaking the geological survey indicates that the deposit clearly exceeds the required deposit and could hold as much as 50-60 million tonnes of lime. The final deposit quantity will be defined very clearly in their final report due end of September 2008.

All necessary Mining PL Permits are current and are in the name of MCL and on completion of the EIA the final application for the Mining License will be submitted.

TANZANIA CEMENT INDUSTRY

Cement consumption in Tanzania and the immediate region in the East Africa Community has been on the increase over the past 6 years. It is estimated that in the last three years, Tanzania has been using approximately 1,600,000-1,800,000 tonnes of cement annually. This demand is expected to increase in the coming years especially with the increased focus in the country's infrastructure as well as private sector and mining industry developments due to take place. With the shortages presently being experienced, cement is currently being imported to supplement local production. This project will certainly help with development in the southern regions of Tanzania by reducing the requirements for imported cement into the region. In addition, the latest prices in the Mtwara, Lindi and Ruvuma regions are presently over US\$ 20.00 per 50 kg bag of cement and again this project through a market reduced

estimated price of US\$ 10.00 per 50 kg bag will enable and encourage further development to take place in these regions. Exports of cement to northern Mozambique are expected to increase due to the reduced price of cement available in Mtwara.

All three current cement manufactures in Tanzania- Portland Cement, Tanga Cement and Mbeya Cement - have their factories located either in the northern parts of Tanzania or the southwestern region and there is no cement factory in the southeastern region to offer a cost effective product. All cement presently sold in the southeastern part of Tanzania comes from these cement factories or Nampula and Nacala in Mozambique and with high costs of transport prices of cement in this region are some of the highest in Tanzania.

It must be noted that all these 3 existing cement plants in Tanzania have recently undertaken considerable expansion to meet the growing local as well as regional demands and so will be also looking to supply the Mtwara region. The investors in MCL are confident that unless there is considerable 'dumping' of cement (which will be contested by MCL) in the southern regions by these companies, MCL will be still very competitive and will be able to adequately sustain all competition due to high transport costs.

In addition the proposed cement factory in Mikindani will also be in a position to meet market needs of the Mozambican neighbour in the northern parts of their region which also suffers from high cement prices.

MCL proposes the setting up a 400 tonnes per day (130,000 mt/year) Cement factory and the planned production will be as follows:

<u>Year</u>	<u>Tonnage</u>	<u>No. of Bags</u>	<u>Cap. Utilization</u>
Year 1	116,800	2,336,000	80%
Year 2 onwards	131,400	2,628,000	90%

When MCL commences production, Tanzania's total cement production will increase by around 130,000 tonnes per annum which however will still leave a shortfall in supply which will be covered by imports until capacity is met from the 3 local plants when their expansion programmes have been completed in 2009/10.

LOCATION OF FACTORY

The Prospecting Licence (PL) No. P17402 is to be replaced by a Mining Licence as soon as the Environmental Impact Assessment is complete. It presently covers an area of some 52.12 square kilometres and is approximately 30 kilometres from Mtwara Port where direct sales can be undertaken as well as exports.

The factory site is located in the Ndumbwe Village area north of Mikindani on the main Lindi road from Mtwara and is next to the source of the raw limestone material.

MCL is also undertaking further research into the Ndumbwe Hills area to prove resources of gypsum which are understood to be very close to the resource of lime. This would enable the costs of production to be further reduced. In addition this would also enable the company to engage the local community in some CSR programmes for the schools and hospitals.

Being situated midway between Mtwara and Lindi, and with Kilwa in the northern Lindi Region and Pemba in Northern Mozambique (250 kms and 310 kms respectively from Mtwara), these areas would be adequately covered by the supply of cement from MCL factory to meet demands.

A standard 'Movers Ltd. India' 1400 M2 factory (including 350 M2 office space) will be built on a 2Ha plot, which is about 1 km from the limestone deposit where the raw material will be mined. All unskilled labour will be employed from within the district area and therefore no provision has been made for low cost housing for these potential employees.

PRODUCTION OF CEMENT

A brief description outlining the production of cement, the process, the technology adopted, the raw materials required and the manufacturing method are given below. A more comprehensive write up on these aspects using the Vertical Shaft Kiln (VSK) Cement Plant technology that was prepared by Movers (India) Ltd., is appended to this IM.

Definition of a Cement Plant

Any cement plant installed to produce up to 100,000 tonnes per annum (or 300 tonnes/day) comes into the category of "Cement Plant". The quality of cement produced in cement plants is comparable to that produced by large cement factories and are in line with the International Standards. Such cement plants have a distinctive edge over large cement factories in a number of ways, such as their lower initial investment; they can be set up in rural or undeveloped areas; they require less manpower, maintenance and produce higher yields; and allow quicker return on capital invested.

The Technology

Broadly speaking cement plants are set up by adopting either of the two technologies; Rotary Kilns-a rotating, horizontal tube; or VSK- a stationary, vertical, tubular kiln.

MCL proposes setting up a 400 tonnes per day or 130,000 mt/year cement plant using VSK technology and producing "Portland Standard High Quality 32.5N and 42.5N type, with an additional lower cost 22x plaster cement as and when demand dictates.

The Process

The distinct types of processes adopted in cement plants are:

- Wet process: Kiln feed is in a slurry form
- Semi Wet Process: The slurry is dried into cake and then fed into Kiln.
- Dry Process: Kiln feed is in the form of powder
- Semi Dry Process: The dry powder is converted into nodules by spraying water and these nodules are then fed into the kiln.

VSK based cement plants use a semi-dry process.

Raw materials

The major raw materials required for producing Ordinary Portland Cement (OPC) are: limestone, clay; low volatile coal/coke/petroleum coke/coke Breeze; gypsum; additives (iron ore, laterite or bauxite for correcting the raw mix)

Manufacturing Method

VSK based Cement Plants essentially comprises of the following sections:

- Crushing Section
- Raw Mill Section
- Blending and Storage section

- Vertical shaft Kiln Section
- Cement Mill Section
- Cement Storage and Packing Section

Power

It is recommended that for a 400 tonnes per day plant, raw mill and cement mill motors are rated for 6,600 Volts, 3 phase, 50 Hz Power supply for other motors is rated for 440 Volts. Plant light fittings are rated for 220 Volts. Furthermore, high tension lines (33 KV or 22 KV) should be directly drawn to the plant from the substation of the Electricity Corporation to avoid the voltage fluctuations. The factory should have a sub-station with suitable transformer control panels. To produce a ton of cement, 100 - 115 KW/hr (units) of power is required.

Dust Pollution

The dust emissions are generally low in cement plants due to adequate practices, such as use of high efficiency dust collectors and good housekeeping etc. Efficient Pollution Control equipments comprising of Reserve Jet or Pulse Jet Bag Filters in each section of the Cement Plants are recommended to maintain a very low dust emission level and to have a good control over the environmental aspects.

Water Supply

Water is an essential commodity in a cement plant. A groundwater tank and an overhead tank on the VSK building with suitable pumping arrangement with piping to mill buildings and VSK building are provided for as well as the company sinking its own borehole to ensure adequate supply is always available.

ENVIRONMENTAL IMPACT ASSESSMENT

Generally, the potential environmental impact the cement production technology introduces in the dust emissions. However, in cement plants emission levels are generally low due to adequate practices, such as use of high efficiency dust collectors. Efficient Pollution Control equipments comprising of Reserve Jet or Pulse Jet Bag Filters in each section of the Cement Plants are installed, which tend to maintain a very low dust emission level and thus have a good control over the environment

In the Vertical Shaft Kiln section of the Cement Plant, smoke emission from the kiln chimney (which is kept about 30 m high from the ground level), contains negligible quantities of carbon monoxide, carbon dioxide and dust along with sizeable quantity of steam are released into the atmosphere. In normal course, since the plant is located away from dense population, no pollution control equipment need be installed. However, in the VSK Cement Plant, a Wt Scrubber is normally provided in order to reduce these emissions.

A Tanzanian company, ENATA – Environmental Association of Tanzania – is the appointed EIA organisation and commenced the EIA in July and should be completed by mid to end September 2008 in time for the completion of the study and commencement of the project to meet the proposed deadline of opening the plant by November 2009.

COMPETITION

The competition for MCL is expected to continue to come from:

- Tanzania Portland Cement – Its factory is located in Dar es Salaam but with the company having difficulty in meeting its local demands as well as shipping costs being

high the landed cost to compete with MCL will be difficult even after their expansion programme has been completed in 2009/2010.

- Tanga Cement – Its factory is located in Tanga in the north. Again, with shipping costs and their local market to satisfy they will also find it difficult to compete with MCL.
- Mbeya Cement – Its factory situated in Mbeya region where routes to Mtwara and Lindi would have to be through Dar es Salaam which will make it extremely difficult for them to compete for this market. At present Mbeya Cement are concentrating their efforts on meeting the demands for cement in neighbouring Zambia.
- Imported cement mainly from overseas from such places as the Far and Middle Eastern countries as well as India and with the minimum quantities of some 25,000 tonnes per month per shipment there are very few buyers willing to invest in such large quantities.

MCL's ability to compete effectively with its primary competitors will be based on its pricing and the quality of its cement products. It is proposed that MCL will market its cement ex factory for between US\$ 180.00/mt (US\$ 8.00/05kg bag) and US\$ 200.00 (US\$ 10.00/50kg bag). Current market price for cement in the country averages between US\$ 260 to 490/mt (US\$13.00 to 24.50/50 kg bag).

In the wake of positive macro-economic reforms, the Tanzania (especially in southern Tanzania following the Mtwara Corridor SDI programme recently completed in 2006) and Mozambique economies are expected to experience significant growth in the next three to five years, which will impact on the demand side of cement. It is expected that Makonde Cement Ltd should be able to capture a significant proportion of this growth, in addition to gaining a market share directly from its competitors by positioning themselves in the Mtwara region.

MANAGEMENT

For the cement plant size proposed, it is recommended that the minimum manpower requirement be as follows:

Designation	Number
Officers	13
Skilled labour	92
Casual labour	35

Makonde Cement however proposes to employ a total of 165 whose positions are shown below:

Designation	No.	Designation	No.
General Manager	1	Electrician	4
Factory Manager	1	Secretaries	2
Finance Manager	1	Receptionist	1
Chief Chemist	1	Laboratory Asst.	4
Admin. Officer	1	Fitters/Welders	3
Supervisors	4	Plant Operators	8
Engineers	1	Tractor Drivers	6
Foreman	4	Stores Clerks	4
Finance Officers	3	Laborers	116

ECONOMICS BENEFITS

The project has economic benefits for the country, as it offers the following:

- Substantial savings in foreign exchange through reduced importation of cement.

- Reduced and contained prices will mean more opportunities in the Mtwara and Lindi regions through lower construction costs to potential investors.
- Will add to the Government object of poverty reduction by creating employment for an estimated 185 employees.
- Due to profit potential and employment opportunities, the Government will receive taxes from the project, which will have the effect of positively contributing to the Government's drive for incremental tax revenues.
- Transfer of the latest know-how and technology to Tanzania and Tanzanians.
- Development of specialized skills and thus development of the industry.

4. Dynamics of Tanzania

Introduction

Tanganyika gained independence in 1961 and Zanzibar became independent in 1964. The two sovereign countries entered into a political union in April 1964 to form the United Republic of Tanzania. The country is situated on the East African coast, and has a total land mass of 945,087 km² (France 545,630 km²). The commercial capital is Dar es Salaam and the political capital is Dodoma.

Tanzania has a population of approximately 38 million, growing at just under 3% annually, with approximately 70% living in rural areas. The official languages are Kiswahili and English.

Political climate

Tanzania was led into independence by Julius Nyerere, who went on to become a towering figure on the national, regional, and international scene. He ruled the country for 24 years, before voluntarily stepping down in 1985. Previously a socialist one-party state, Tanzania converted to democracy and held its first multi-party elections in late 1995.

The most recent general elections were held in December 2005 and won by the ruling Chama Cha Mapinduzi (CCM) party, whose candidate and now president, Jakaya Kikwete, succeeded Benjamin Mkapa of the same party. The elections were widely acknowledged internationally as a successful expression of democracy with the exception of some election violence on the politically volatile islands of Zanzibar. Tanzania is internationally recognized as one of the most politically stable countries in Africa.

Economic climate

The Tanzanian economy relies on agriculture employing approximately 80% of the labour force and contributing just under 50% to GDP.

The Tanzanian government has made considerable progress towards achieving macro-economic stability in recent years. With inflation now firmly under control, attention is focused on establishing a credible fiscal policy. Tanzania's broader economic policy orientation has been led by the poverty reduction and growth facility programme agreed with the IMF in April 2000 – its main goal being the creation of a favourable macro-economic climate for achieving GDP growth rates of at least 6% which, coupled with increased spending in the social services sector, should allow the country to reduce poverty significantly. The country is benefiting from debt relief, including Highly Indebted Poor Country (HIPC) relief since 2002, the more recent Multilateral Debt Relief Initiative (MDRI), and from numerous bilateral creditor nations under the Paris Club. To date, approximately USD 4 billion of debt has been forgiven by Tanzania's multilateral and bilateral creditors.

Tanzania's sustained economic reforms have generated strong macroeconomic performance characterized by strong GDP growth and low inflation. The economy performed well in the year 2007, with a GDP growth of around 7%, the highest in the East African region. The sectors that are estimated to have grown strongly during the year include trade and tourism, manufacturing, mining, and construction, which together contributed about 40% of GDP. Tanzania has also seen a significant increase in annual foreign direct investment (FDI). FDI flows have remained healthy over the last decade, averaging around USD 200 million annually, much of it in the fast growing mining sector.

The recent drought experienced in the country in the last quarter of 2005, coupled with the continued persistent increase in oil prices have served to both dampen growth and exert

upward pressure on inflation. Notwithstanding these pressures, the real GDP growth rate is forecast to approach 7.7% in 2008, and remain robust thereafter, while annual inflation is expected to average about 6%.

The population remains overwhelmingly rural, with almost 70% residing in the countryside and relying on agriculture for a living. Indeed agriculture remains the leading economic sector, accounting for about 50% of GDP, 75% of merchandise exports and provides employment for about 80% of Tanzanians. In partnership with the donor community, the government is significantly upgrading the rural infrastructure, and together with general economic reform it is expected that rural output and consumption will grow strongly in the medium term.

Business forms

Limited companies

MCL is a limited liability private company.

The provisions which apply to MCL as a limited company are contained in the Companies Act 2002, which is modeled closely on the UK Companies Act 1985. Limited companies may be public or private. A private company is prohibited from inviting the general public to subscribe to its shares, and from having more than 50 members, whereas a public company may offer its shares to the general public. There is no maximum number of members in respect of a public company and for a company to be listed, though its shares must be freely transferable. Currently, foreign ownership of shares in public limited companies is restricted to 60%.

Branches of foreign companies

A company incorporated outside Tanzania may carry on business in the country through a locally registered branch. In order to establish a branch the following must be complied with:

- Approval of the Company name from the Registrar of Companies;
- A certified copy of the memorandum and articles of association, charter, statutes or other documents constituting the parent company must be filed with the Registrar of Companies;
- A list containing the names and addresses, nationalities and occupations of its directors and company secretary must be provided;
- The names and addresses of one or more Tanzania residents who are authorised to accept legal notices on the company's behalf must be provided;
- A statement of existing mortgages and charges created by the company in Tanzania (if any) must be provided; and
- The address of the company's registered or principal office must be provided.

Taxation

A general guide outlining the main taxes in Tanzania is set out below. You are advised to seek your own professional advice in respect of any specific transaction.

Tax table summary

Tax	Amount	Note
Income Tax-Corporate	30%	Income tax is levied on the profits of Tanzanian resident companies and foreign companies trading in Tanzania through a branch or agency. Foreign incorporated companies are non-residents for tax purposes unless they are centrally controlled from Tanzania.
VAT	20%	
Payroll Obligations		Income tax is payable by individuals resident in Tanzania on their world-wide income and by non-residents on income from Tanzanian sources. Of each employee's salary plus 10% company contribution to the state pension funds. No limit.
NSSF and/or PPF	10%	Of each employee's salary not involved in agricultural farming
Skills & Development Levy	6%	
Withholding Tax		No withholding tax applies where the shareholder is a Tanzanian resident company which either controls 25% or more of the voting power, or which is a registered financial institution.
Dividends		
Public (listed) company	5%	
Other (non-public)	10%	
Capital Gains Tax		
Disposal of Investments	10%	For resident individuals
	30%	For resident companies
Customs Duty		
Capital goods, agricultural inputs	5%	
Spare parts (except for vehicles)	10%	
Packaging materials	10%	Unformed / not printed
	25%	Formed / printed
Consumer goods	25%	
Loss relief	5 years	Max. tax loss carry-forward is 5 yrs.

Income tax

Charge to tax

Income tax is levied on the profits of Tanzanian resident companies and foreign companies trading in Tanzania through a branch or agency. A resident company in Tanzania is liable to pay tax on its world-wide business profits. All companies incorporated in Tanzania are treated as resident companies. Foreign incorporated companies are non-residents for tax purposes, unless they are centrally managed and controlled from Tanzania.

Basis period, rate of tax and due date for payment

The basis period for taxation is the calendar year, although a taxpayer's own accounting period may be accepted as the basis period. Income tax is charged on resident and non-resident companies at the corporate rate of income tax, currently 30%. Income tax is paid by corporations on a current year basis in four quarterly installments, with any final balance payable six months after the year-end.

Deductible expenditure and capital deductions

In calculating taxable profit, deductions are allowed for revenue expenditure incurred wholly and exclusively in the production of income, with some statutory exceptions. The calculation of the taxable profit of a branch or permanent establishment of a non-resident company is the same as for a resident company except that no deduction is allowed for certain head office costs.

Specific tax depreciation provisions govern relief for capital expenditure. Expenditure on plant and machinery prior to 1 July 1999 generally qualified for a capital deduction of 12.5% on a straight-line basis.

Capital allowances are currently at the following rates: -

- Buildings - 5% straight line
- Plant and machinery - 50% first year allowance
- Intangible assets – over useful life straight line

Dividends

Dividends are generally paid net of withholding tax, except no withholding of tax is made where the relevant shareholder is a Tanzanian resident company which either controls 25% or more of the voting power of the company making the dividend or is a registered financial institution.

Interest

Interest income earned by persons other than corporations is paid net of a 15% rate of tax, unless it is treated as business income (for example if earned by banks) in which case the rate is the normal income tax rate.

Foreign tax relief and double tax treaties

Where income arises in a country with which a double tax treaty is signed, the treaty governs relief. Double tax treaties are in force with Canada, Denmark, Finland, India, Italy, Norway, Sweden, and Zambia. Double tax treaties signed but not yet ratified include treaties with Kenya, South Africa, South Korea, Uganda and Zimbabwe. Where no treaty is in place domestic legislation also provides for credit relief for foreign taxes in certain circumstances.

Transactions between related parties

Where one related party is resident and the other non-resident, revenue transactions between them may be adjusted for tax purposes to achieve the same results as if the revenue transaction had been carried out by independent persons dealing at arm's length.

Income tax on individuals

An individual is regarded as a resident in Tanzania in any tax year if either he/she:

- has a permanent home in Tanzania and visits Tanzania in any one year; or
- has no permanent home but is present in the country for either 183 days in any one year, or an average of 122 days per year over a period of 3 years.

Income tax is payable by individuals resident in Tanzania on their world-wide income and by non-residents on income from Tanzanian sources. Any amount paid to a non-resident individual in respect of employment or services rendered to an employer who is resident or has a branch in Tanzania is deemed to be derived from Tanzania.

Taxation of income from employment

Taxable income will include salary and the value of any benefits in kind arising from the individual's employment. Subject to certain exceptions, expenses incurred wholly and exclusively in the performance of employment duties are deductible. The taxation measure of non-cash benefits is generally the cost to the employer of providing the benefit. There are special rules for taxing the provision of living accommodation.

Local income taxes

Local income tax is normally deductible by the employer and for individuals based in Dar es Salaam there is an additional 1% deduction from pay which is accounted for by the employer.

Capital gains tax

A capital gain arising on the disposal of premises or financial assets is subject to 10% capital gains tax for individuals and 30% for companies. There is no relief for capital losses.

Levies on payroll costs and national insurance

In addition to deducting PAYE (pay as you earn) and any local income tax, an employer also has to bear the following charges in respect of payroll costs: Payroll Levy: 4% and VETA (Vocational Education) Levy: 2%. There are two state social security schemes for employees in private companies: the NSSF and the PPF. The employer's statutory minimum contribution is 10% of the employee's remuneration, with the employee charged a matching amount. However, employers may choose to exceed their 10% minimum, contributing the majority or the whole of the 20% combined employer/employee amount and thereby reducing what is deducted from their employees' paychecks.

Indirect taxes

VAT

Generally, VAT is chargeable on all taxable goods and services supplied in, or imported into, mainland Tanzania. A separate Act (but with similar provisions) applies in Zanzibar. The standard VAT rate is 20%. Exports are subject to a zero rate.

Registered persons can usually offset the input VAT paid on purchases against the output VAT charged on sales. The purchases for which VAT is being reclaimed must be wholly in respect of the trade. VAT payable in respect of capital goods imported or purchased by persons registered for VAT is permanently deferred.

VAT returns and VAT payments are due on a monthly basis. Repayment is to be made 30 days after the due date of the return for the last month of a six-month period or receipt of the last or any outstanding tax return due for this six-month period if later. There is relief for those with regular repayment claims (e.g. exporters) as they can apply to the Commissioner for refunds to be made on a monthly basis.

Customs duties

Customs duties are levied on imports at rates between 0% and 25%. For capital goods, the standard rate is 5%, unless in respect of a sector of economic infrastructure where a 0% rate applies. For goods other than capital goods the rates are as follows: semi-processed goods and spare parts (except motor vehicle spare parts) 10%, fully processed inputs, motor vehicle spare parts 20% and consumer goods 25%.

Stamp duty

Stamp duty is payable on all receipts at a rate of 1.0% (or 4% where no composition agreement is in place), unless the recipient is VAT registered. Examples of other instruments giving rise to stamp duty obligations include stamp duties in relation to conveyances, leases, transfers of shares, issue and transfer of debentures. The registration of new share capital or an increase thereof is tax-free.

Local taxes

Local government levies property tax based on the value of premises. Local government is also entitled to charge a 0.3% service levy based on turnover generated in the relevant district. For agricultural produce and livestock there is a cess tax. For major export crops produce cess can not exceed 5% of the producer price.

Investment incentives

Those investing in the priority sectors in Tanzania can apply for a certificate of approval from the Tanzania Investment Center, entitling them to certain investment incentives, a brief description of which is given below.

Tanzania Investment Center (TIC)

The TIC is a one stop agency of the GOT established under the Tanzania Investment Act, 1997 (TIC Act) to promote, co-ordinate and facilitate investment in Tanzania and to advise the government on investment policy.

The TIC applies to both local and foreign investors. Businesses which may enjoy the benefits and protection provided under the TIC Act, are those which:

- if wholly owned by a foreign investor or a joint venture - the minimum investment capital of which is not less than the Tsh equivalent of USD 300,000; or
- if locally owned - the minimum investment capital of which is not less than the Tsh equivalent of USD 100,000.

A business enterprise, in respect of which a certificate has been granted, will be entitled to the following key benefits, among others, in respect of agriculture (which is considered to be a priority area):

- Custom duty on capital goods 5%
- Deferment of VAT on capital goods 0% (VAT now at 20%)
- Capital allowance deduction in the year of income 100%

Work permits

Generally, permission must be obtained from the Ministry of Labour when employing a foreigner prior to his/her entry to the country or prior to commencement of work. Investors who hold a Certificate of Incentives are permitted up to 5 work permits for expatriates. Work permits are valid for two years and may be renewed at the discretion of the authorities.

Safety of Investments

Holders of a certificate of incentive are guaranteed the safety of their investments under the TIC Act and the Constitution of the United Republic of Tanzania and are guaranteed transfer of capital and profits.

Regulatory environment

The Fair Competition Act (2003) governs the regulation of trade. It promotes and protects effective competition. The body charged with carrying out the provisions of the act is the Fair Trade Commissioner. The legislation also regulates monopolies and mergers and acquisitions.

The Capital Markets and Securities Authority regulates the listing of and dealing with securities on the Dar es Salaam Stock Exchange. It derives its authority from the Capital Markets and Securities Act (1994).

Exchange control

The Government's objective is to remove all foreign exchange controls.

Transfer of capital and profits

Regulations permit unconditional transferability through any authorised bank in freely convertible currency of net profits, payments of foreign net profits, payment of foreign loans, royalties, fees, charges in respect of foreign technology, remittance of proceeds and payment of salaries and other benefits to foreign employees working in Tanzania.

Obtaining credits from domestic sources by foreign investors

Any foreign business operating in Tanzania may obtain credit from domestic financial institutions.

Transfer of shares

The allotment or transfer of shares from residents of Tanzania to non-residents does not require exchange control approval.

Intellectual property

Protection is provided by statute. There is a registry for patents, trade and services marks.

Membership of international regional organisations

Tanzania is a member of the United Nations, the Commonwealth, the Organisation of African Unity, the East African Treaty, African Economic Community, World Trade Organisation, East African Community, African and Caribbean countries in relation to Europe and SADC.

Settlement of disputes

Tanzania is party to the Convention on Recognition and Enforcement of Foreign Arbitral Awards (New York Convention of 1958) but this is only applicable where both Tanzania and the country in which an arbitral award was granted are party to the Convention. Tanzania has no legislation providing for reciprocal enforcement of foreign judgments generally. It has legislation (the Foreign Judgments Reciprocal Enforcement Ordinance, Cap 8) for the enforcement of foreign judgments from selected countries and applies to countries which have in place reciprocal arrangements with Tanzania for enforcement of judgments. The countries listed in the Ordinance are, United Kingdom, British dominions, protectorates and mandated territories and judgments obtained in the course in the United Kingdom and the following countries to which the application of the ordinance was extended, namely:

Lesotho, Botswana, Malaysia, Mauritius, New South Wales, Zambia, Seychelles, Somalia, Zimbabwe and Swaziland. Foreign judgments from countries not listed under the Act are dealt with in accordance with common law.

Section 23 of the Investment Act 1997 provides that where disputes arise between a foreign investor and the investment centre or the GOT, such disputes should be resolved through (a) amicable arrangements, or by resorting to either (b) the arbitration laws of Tanzania for investors, or (c) in accordance with the rules of procedure for arbitration of the ICSID or (d) within the framework of any bilateral or multilateral agreement on investment protection agreed to by the Government of Tanzania and the Government of the country of the investor. These alternative methods include the use of UNCTRAL, ICSID, International Chamber of Commerce or London Court of International Arbitration rules or other arbitration rules.

Monetary policy

The BOT is the country's central bank and is responsible for implementation of the GOT's fiscal policies in addition to acting as the GOT's adviser and treasurer. The BOT sets the minimum lending rates leaving commercial institutions free to set any rate equal to or above this rate. The exchange rate is a floating rate against the USD.

Investment guarantees and settlement of disputes

There are constitutional guarantees against nationalisation and expropriation in Tanzania. Tanzania is a member of both ICSID and the Multilateral Investment Guarantee Agency. Any disputes arising between the GOT and investors are expected to be settled amicably through negotiations or may be submitted to the abovementioned organisations for arbitration. Tanzania is a growing destination for foreign direct investment.

Political risk insurance

Should a potential investor so desire, private political risk insurance is available.

Immigration quotas

A certificate of incentives granted by the TIC entitles the investor to an automatic immigrant quota of up to five persons during the start up period. Additional immigrant quotas can be granted whenever a specific request is submitted to the TIC.

Bilateral treaties

Tanzania has a multilateral framework, regional treaties and bi-lateral treaties for the promotion and protection of foreign direct investment with Germany, the Netherlands, Switzerland and the United Kingdom.

It also has bilateral treaties for the avoidance of double taxation in respect of dividends, interest and royalties with Canada, Denmark, Finland, India, Italy, Norway, Sweden, and Zambia.

5. Pro forma financial Information

A summary of some key projected financial metrics of the project follow. More detailed financial are provided separately in the appendix.

Assumptions

Establishment costs (excl. resource):

Fixed investment	USD 23.4 million
Pre-operational expenses	USD 3.1 million
Working capital	USD 1.9 million
	<u>USD 28.4 million</u>

KW per tonne	110
Hours per day	24
Cost per KWh	USD 0.1
Leverage ratio	58%
Debt (5-yr, 10%, 1-yr grace)	USD 18.7 Million

	Year 1	Year 2	Year 3	Year 4	Year 5
Capacity utilization	85%	90%	90%	90%	90%
Sales volume (tonnes)	122,400	131,275	131,400	131,400	131,400
Price per tonne (USD)	160	172	185	199	214

Projections (USD millions)

	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	19.6	22.6	24.3	26.1	28.1
Direct costs	6.2	6.6	7.1	7.6	8.2
Production overheads	1.8	1.9	2.0	2.1	2.2
Gross profit	11.6	14.1	15.3	16.5	17.7
Other expenses	0.7	0.7	0.7	0.7	17.0
EBITDA	10.9	13.4	14.6	15.7	17.0
PBT	6.2	8.7	10.2	11.8	13.6
PAT	4.3	6.1	7.2	8.3	9.5
Dividends (25% of PAT)	-	1.5	1.8	2.1	2.4
Fixed Assets (net)	25.2	22.9	20.6	18.4	16.1
Current Assets	9.6	14.7	18.8	23.4	28.5
Total Assets	37.2	39.4	40.7	42.4	44.5
LT Debt	18.7	14.6	10.2	5.4	-
Total Liabilities	19.5	17.1	13.0	8.5	3.5
Equity (inc Retained Earnings)	17.7	22.3	27.7	33.9	41.0
Cash from Operations	10.3	10.8	11.5	12.2	12.9
Interest plus Principal costs	1.9	5.9	5.9	5.9	5.9
Net cash generated (ex-div)	8.2	4.9	4.1	4.5	4.9
Breakeven capacity	64%	54%	49%	44%	39%
Margin of safety (price)	38%	46%	51%	56%	61%
NPV (pre-debt, @15%)	32.9 Million				
IRR (@CV = 6xYr 5 CFs)	43%				

6. Risk factors

Any investment in a company in Tanzania necessarily involves a certain degree of risk. The following considerations, without limitation, are among those that should be evaluated carefully by any potential purchaser when considering an investment.

Pricing risk

The company's performance may be adversely affected by a decline in the selling price of cement that may come about as a result of fierce competition from the other local producers and imported cement. This is a situation that at present is hard to imagine due to the current selling prices being over 46% higher than the projected selling prices this project has based its assumptions on.

Financial and business risk: risks of leverage

The company's activities may expose it to a variety of financial risks including: credit risk, foreign currency risk, commodity price fluctuation risk and cash flow interest-rate risk.

Credit risk

The company may become subject to credit risk. It can mitigate this by having policies in place to ensure that the sales of products are made to customers with an appropriate credit history. Sales to retail customers are made in cash or via strictly credit terms.

Foreign currency risk

As and when the need arises, the company may enter into transactions denominated in foreign currencies (primarily USD). As a result, the company may be subject to transaction and translation exposure from fluctuations in foreign currency exchange rates, though some currency hedging instruments available through the major banks in Tanzania can help mitigate this risk.

Interest rates and liquidity risk

Fluctuations in interest rates may impact on the operating activities of the company. In the ordinary course of business, the company receives cash from its operations and is required to fund working capital and capital expenditure requirements. Funding deficits for the company's operations may have to be financed through bank borrowings and overdrafts from financial institutions, with the attendant interest rate exposure that entails.

Inflation

The GOT has been successful in reducing inflation in the country to current levels of around 5% per annum, though there can be no guarantee that inflation will remain contained over the purchaser's investment horizon. It should be noted that moderate levels of inflation can in fact be beneficial to MCL, potentially affording the company greater pricing flexibility.

Political/Sovereign risks

Investments in developing economies such as Tanzania could be adversely affected by political, legal, or economic developments. Such risks include: (i) social, political and economic instability; (ii) the absence of well developed legal structures; (iii) the absence of a fully

market-oriented economy; and (iv) the potential for significant changes in Government regulation and policy.

Regional economic integration

Tanzania is a member of the East African Community (EAC), alongside Kenya, Uganda, Rwanda and Burundi. As and when the EAC moves toward its stated goal of economic and political union, imports into Tanzania from member states may present a risk to MCL.

Legal risk

Many of the laws that govern private and foreign investment, securities transactions, intellectual property rights, creditors' rights and other contractual relationships in Tanzania are relatively new and/or largely untested. As a result, any purchaser may be subject to a number of unusual risks, including inadequate investor protection; contradictory legislation; incomplete, unclear and changing laws; ignorance or breaches of regulations on the part of other market participants; lack of established or effective avenues for legal redress; lack of standard practices and confidentiality customs customary of developed markets; and lack of ability to properly enforce existing regulations. There can be no assurance that this difficulty in protecting and enforcing rights will not have a material adverse effect on MCL's future operations.

APPENDICES

1. Financial Projections
2. Mineral Rights Notification Letter
3. Resource Assessment by SRK Consulting
4. VSK Cement Plant Layout
5. VSK Cement Plan Description
6. Advantages of Small Plant vs Big Plant
7. Letter from Artumas re:Power Supply
8. Draft EIA Letter from ENATA
9. Project Manager Letter from BISH

1. Financial Projections

MAKONDE CEMENT LIMITED
Assumptions (USD)

	Equity	Debt	Total
A. Fixed Investments			
1 Movers comp plant CIF & incl Commissioning	2,295,810.00	13,009,590.00	15,305,400
2 Civil works	1,837,350.00	4,287,150.00	6,124,500
3 Housing & infrastructure	270,000.00	180,000.00	450,000
4 Shareholders Contribution see Fixed Invest. Resource	3,975,000.00	-	3,975,000
5 Vehicles & Office Equipment	33,000.00	132,000.00	165,000
6 Local costs of installation, Tport, Labour etc.	1,416,750.00	-	1,416,750
	<u>9,827,910</u>	<u>17,608,740</u>	<u>27,436,650</u>
B. Pre-Operating Expenses			
1 Feasibility Study Preparation & compensation	388,000.00	-	388,000
2 Licenses & Registration	15,000.00	-	15,000
3 Training	75,000.00	-	75,000
4 Trial Production	100,000.00	-	100,000
5 Interest during Construction period	1,942,641.57	-	1,942,642
6 Others - Consultancy design and supervision of project	551,205.00	-	551,205
	<u>3,071,847</u>	<u>-</u>	<u>3,071,847</u>
C. Working Capital			
1 Raw Materials	51,868.16	121,025.70	172,894
2 Packing Materials & Stores & consumables (1375)	9,307.50	21,717.50	31,025
3 Salaries & wages	31,025.00	-	31,025
4 WIP	27,076.36	63,178.18	90,255
5 Finished Goods	90,254.55	210,593.94	300,848
6 Receivable	270,763.64	631,781.82	902,545
	<u>480,295</u>	<u>1,048,297</u>	<u>1,528,592</u>
TOTAL PROJECT COST	<u>13,380,052</u>	<u>18,657,037</u>	<u>32,037,089</u>
% of TOTAL PROJECT COST	42%	58%	100%

MAKONDE CEMENT LIMITED
Assumptions (USD per annum)

Direct Costs - tonne	
Drill & Blast + Quarry site Royalties	493,298
Raw Material costs	5,705,498
	<u>6,198,795</u>
Production Overheads	
Salaries/Wages & Ins & T/port etc.	248,200
Packing	62,050
Insurance/rent/housing/	49,640
Elect / water / advertising/phones /office exes/etc	1,418,560
	<u>1,778,450</u>
Administrative Expenses	
Salaries & Management Contract - ex Movers	434,350
Other Staff Benefits	24,000
Office Supplies	12,000
Communication	12,000
Transport(fuel, trav, rep)	36,000
Rent	24,000
Bank Charges	3,000
Others (Maintenance-Bdgs)	18,000
	<u>563,350</u>
Selling Expenses	
Salaries	62,050
Transport	12,000
Communications etc	1,800
Others sales promotion etc	6,000
	<u>81,850</u>
TOTAL	<u>8,622,445</u>

MAKONDE CEMENT LIMITED
PROJECTED INCOME STATEMENT
(USD)

Sales	19,584,000	22,579,300	24,295,860	26,118,050	28,076,903
Direct Costs	6,198,795	6,563,430	7,055,687	7,584,864	8,153,729
Drill & Blast + Quarry site Royalties	493,298	522,315	561,489	603,600	648,870
Raw Material costs	5,705,498	6,041,115	6,494,199	6,981,264	7,504,858
Production Overheads	1,778,450	1,867,811	1,958,573	2,053,874	2,153,939
Gross Profit	11,606,755	14,148,060	15,281,600	16,479,312	17,769,235
Administrative Expenses	563,350	591,518	621,093	652,148	684,755
Selling Expenses	81,850	85,943	90,240	94,752	99,489
Total Operating Expenses	645,200	677,460	711,333	746,900	784,245
EBITDA	10,961,555	13,470,600	14,570,267	15,732,412	16,984,991
Total Depreciation & Amortization	2,881,634	2,881,634	2,881,634	2,881,634	2,881,634
PBIT	8,079,921	10,588,965	11,688,632	12,850,778	14,103,356
Less: Interest Expenses	1,865,704	1,865,704	1,463,699	1,021,494	535,068
PBT	6,214,217	8,723,261	10,224,933	11,829,284	13,568,288
Tax (30%)	1,864,265	2,616,978	3,067,480	3,548,785	4,070,486
PAT	4,349,952	6,106,283	7,157,453	8,280,499	9,497,802
Dividends (25%)	-	1,526,571	1,789,363	2,070,125	2,374,450
Retained Earnings	4,349,952	4,579,712	5,368,090	6,210,374	7,123,351
Net Margin	22.2%	27.0%	29.5%	31.7%	33.8%

MAKONDE CEMENT LIMITED
BALANCE SHEET PROJECTIONS
(USD)

	Year 1	Year 2	Year 3	Year 4	Year 5
ASSETS					
Current Assets					
Cash	8,405,634	13,353,327	17,417,881	21,898,640	26,827,538
Accounts Receivables	816,000	940,804	1,012,328	1,088,252	1,169,871
Inventories	354,544	374,722	400,634	428,388	458,119
Total Current Assets	9,576,179	14,668,853	18,830,842	23,415,280	28,455,528
Fixed Assets					
Total Fixed Assets	27,436,650	27,436,650	27,436,650	27,436,650	27,436,650
Less: Depreciation	2,267,265	4,534,530	6,801,795	9,069,060	11,336,325
Net Fixed Assets	25,169,385	22,902,120	20,634,855	18,367,590	16,100,325
Intangible Assets					
Pre-Operational Expenses	3,071,847	3,071,847	3,071,847	3,071,847	3,071,847
Less: POE Amortization	614,369	1,228,739	1,843,108	2,457,477	3,071,847
Net Intangible Assets	2,457,477	1,843,108	1,228,739	614,369	-
Total Assets	37,203,041	39,414,081	40,694,436	42,397,239	44,555,853
LIABILITIES					
Short Term Liabilities					
Accounts Payable	816,000	940,804	1,012,328	1,088,252	1,169,871
Dividends	-	1,526,571	1,789,363	2,070,125	2,374,450
Long Term Liabilities					
Fixed Capital Loans	18,657,037	14,636,990	10,214,939	5,350,682	-
Total Long Term Liabilities	18,657,037	14,636,990	10,214,939	5,350,682	-
Total Liabilities	19,473,037	17,104,365	13,016,630	8,509,059	3,544,321
EQUITY					
Owner's Capital	13,380,052	13,380,052	13,380,052	13,380,052	13,380,052
Retained Earnings	-	4,349,952	8,929,664	14,297,754	20,508,128
Current Year's Earnings	4,349,952	4,579,712	5,368,090	6,210,374	7,123,351
Total Equity	17,730,004	22,309,716	27,677,806	33,888,180	41,011,531
Total Equity and Liabilities	37,203,041	39,414,081	40,694,436	42,397,239	44,555,853

**MAKONDE CEMENT LIMITED
CASHFLOW PROJECTIONS
(USD)**

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Cash Inflows:						
Equity	13,380,052					
Loan	18,657,037					
Payables		816,000	124,804	71,523	75,925	81,619
Profit Before Depreciation & Amortization		10,961,555	13,470,600	14,570,267	15,732,412	16,984,991
Total Cash Inflows	32,037,089	11,777,555	13,595,404	14,641,790	15,808,337	17,066,610
Cash Outflows:						
Fixed Investments	30,508,497					
Stocks	1,293,648	(939,104)	20,178	25,912	27,755	29,730
Accounts Receivables	31,025	784,975	124,804	71,523	75,925	81,619
Taxes		1,864,265	2,616,978	3,067,480	3,548,785	4,070,486
Total Cash Outflows	31,833,170	1,710,136	2,761,960	3,164,915	3,652,464	4,181,836
Net Cash Balance	203,919	10,067,419	10,833,443	11,476,875	12,155,873	12,884,774
Beginning Cash balance	-	203,919	8,405,634	13,353,327	17,417,881	21,898,640
Cash Balance before Debt Repayment	203,919	10,271,338	19,239,078	24,830,202	29,573,753	34,783,413
Loan Repayments:						
Interest on Fixed Loans	-	1,865,704	1,865,704	1,463,699	1,021,494	535,068
Principal Repayments	-	-	4,020,047	4,422,051	4,864,257	5,350,682
Dividends	-	-	-	1,526,571	1,789,363	2,070,125
Cash Balance after Repayment	203,919	8,405,634	13,353,327	17,417,881	21,898,640	26,827,538

**MAKONDE CEMENT LIMITED
RATIO ANALYSIS**

		Year 1	Year 2	Year 3	Year 4	Year 5
Profitability Ratios	Definition					
Gross Profit Margin	<u>Gross Profit</u> Revenue	59.3%	62.7%	62.9%	63.1%	63.3%
Net Profit Margin	<u>PAT</u> Revenue	41.3%	46.9%	48.1%	49.2%	50.2%
Cash Flow Ratio						
Debt Service Coverage Ratio	<u>Operating Cashflow</u> Interest and Principal Repayment	5.40	1.84	1.95	2.07	2.19
Balance Sheet Ratios						
Current Ratio	<u>Current Assets</u> Current Liabilities	3.57	2.15	2.73	3.36	4.03
Quick Ratio	<u>Current Assets excl. Stocks</u> Current Liabilities	11.30	15.19	18.21	21.12	23.93
Asset Turnover Ratio	<u>Revenue</u> Fixed Assets	0.78	0.99	1.18	1.42	1.74
Debt to Equity Ratio	<u>Long Term Debt</u> Equity	1.05	0.66	0.37	0.16	0.00

2. Mineral Rights Notification Letter

CONFIDENTIAL
THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF ENERGY AND MINERALS

Telegrams "ENERGY".
Telephone 255-22-2110426
Fax No:255-22-2130899
in reply please quote:
E-mail: mem@raha.com

743/33 SAMORA AVENUE,
P.O Box 2000
DAR-ES-SALAAM.



Ref. No. CDA.88/171/01

21/06/2008

Hon. Mohamed Sinani, (MP),
Chairman,
Makonde Cement Co. Ltd.,
MTWARA

RE: MINING LICENSE FOR MAKONDE CEMENT

Please refer to your letter and the resulting conversation we had in my office regarding the subject of the Application of a Mining License for your operations.

I recognize the unfortunate delay that you have experienced with the application. However, it is a part of a necessary process to ascertain that the licensing of one does not interfere with the mining activities of another developer. As you know this problem has been known to happen before with other applicants, and is a repeated source of unnecessary conflicts between developers, mining groups and community residents.

However the Ministry of Energy and Minerals is intent on seeing the development of the Makonde Cement investment in

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the area of Mtwara area and the creation of new employment should have a significant contribution to Mtwara and Lindi regions, and the Socio-economic development of the people. In this regard, and for this reason let me assure you of my Ministry's commitment to these kind of investment projects, and in particular to the success of the Makonde Cement Project.

I therefore wish to assure you, that the Ministry should be in a position to give you a positive response to the Application in not more than 14 days. I have already directed the office of the Commissioner for Minerals to treat your application with urgency.

I will return to you as soon as the Mineral Commission concludes or returns to my office with a position.



Adam K. A. Malima (MP)

DEPUTY MINISTER

MINISTRY OF ENERGY AND MINERALS

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THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF ENERGY AND MINERALS

PROSPECTING LICENCE NO. PL 5450/2008

GRANTED PURSUANT TO
SECTION 29 OF THE MINING ACT, 1998

WHEREAS M/S **Makonde Cement Limited** of P.O. Box 23418, Dar es Salaam-Tanzania has fulfilled the conditions for grant of Prospecting Licence pursuant to Section 28 of the Mining Act, 1998;

I, William M. Ngeleja (MP), Minister for Energy and Minerals subject to the provisions of the Mining Act, 1998 and of the regulations thereunder now in force, or which may come into force during the continuance of this Licence, or any renewal thereof and pursuant to the powers conferred upon me under Section 29 of the Mining Act, 1998 hereby grant to M/S **Makonde Cement Limited** (hereinafter called the Licensee) a licence of type **Prospecting License - All Minerals other than Building Materials and Gemstones**, at Ndumbwe, in Mtwara District, over an area described in Annex A (hereinafter called the Licence Area), conferring on the Licensee the right to carry on such prospecting operations and execute such other works as are necessary for that purpose.

This Licence, unless sooner cancelled, suspended or surrendered pursuant to the provisions of the Mining Act, 1998, shall be valid for a period of **thirty six (36)** months, effective from the date of grant.

Granted this 28th day of August 2008


.....
William M. Ngeleja (MP)
MINISTER FOR ENERGY AND MINERALS

INITIAL PERIOD

From Date	To Date	Prep. Fee and Rent	ERV Number	Date	Signature of CM
28/8/2008	27/8/2009	Prep 2001.00 Rent 13984255	32842597 32843894	1/8/2008 22-09-2008	<i>[Signature]</i>

FIRST RENEWAL

I HEREBY CONSENT TO THE FIRST RENEWAL OF PROSPECTING LICENCE NO. of M/S of P. O. Box for Licence Area described in Annex 'A' and conditions prescribed in Annex 'B' for a period of months effective from the day of year

.....
MINISTER FOR ENERGY AND MINERALS

From Date	To Date	Annual Rent	ERV Number	Date	Signature of CM

SECOND RENEWAL

I HEREBY CONSENT TO THE SECOND RENEWAL OF PROSPECTING LICENCE NO. of M/S of P.O. Box for Licence Area described in Annex 'A' and conditions prescribed in Annex 'B' for a period of months effective from the day of year

.....
MINISTER FOR ENERGY AND MINERALS

From Date	To Date	Annual Rent	ERV Number	Date	Signature of CM

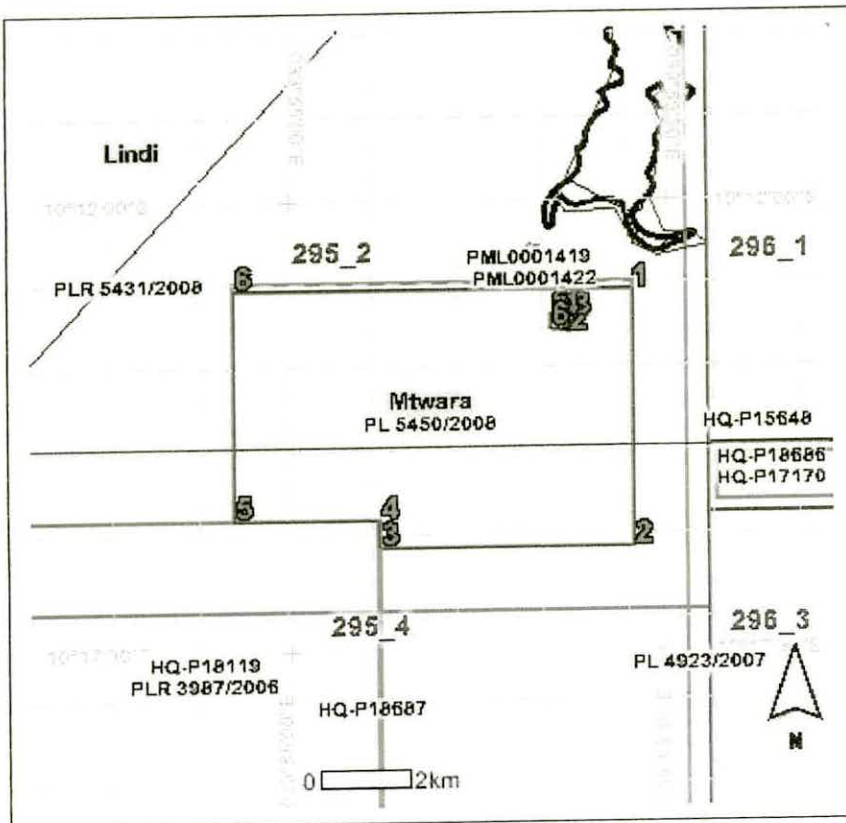
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ANNEX A

DESCRIPTION OF THE LICENCE AREA

Subject to Section 95 of the Mining Act, 1998 the Licence is at **Ndumbwe** area in **Mtwara** District, QDS **295/2, 295/4, 296/1 & 296/3** defined by lines of latitude and longitude having the following corner coordinates (Arc 1960):

Corner	Latitude	Longitude
1	-10 deg. 13 min. 05.00 sec.	39 deg. 59 min. 06.00 sec.
2	-10 deg. 16 min. 15.00 sec.	39 deg. 59 min. 06.00 sec.
3	-10 deg. 16 min. 15.00 sec.	39 deg. 56 min. 04.00 sec.
4	-10 deg. 15 min. 55.00 sec.	39 deg. 56 min. 04.00 sec.
5	-10 deg. 15 min. 55.00 sec.	39 deg. 54 min. 20.00 sec.
6	-10 deg. 13 min. 05.00 sec.	39 deg. 54 min. 20.00 sec.
Excluding valid PMLs No. 0001451 and 0001452 bounded by the following corner coordinates:		
1	-10 deg. 13 min. 23.85 sec.	39 deg. 58 min. 07.53 sec.
2	-10 deg. 13 min. 27.11 sec.	39 deg. 58 min. 23.66 sec.
3	-10 deg. 13 min. 36.76 sec.	39 deg. 58 min. 20.86 sec.
4	-10 deg. 13 min. 34.55 sec.	39 deg. 58 min. 07.45 sec.



Legend	
Licensed boundary	
License Number	PL 5450/2008
District	Mtwara
Direction	

An area of approximately **48.69** Square Kilometres.

WVW

ANNEX B

EMPLOYMENT AND TRAINING

1. The Licensee shall employ Tanzanian personnel with appropriate qualifications to the maximum extent practicable consistent with efficient operations.
2. Subject to Clause 1, the Licensee shall not be restricted in employment, selection, assignment or discharge of its personnel provided, however, that the employment and discharge or disciplining of personnel shall be carried in accordance with the generally applicable laws and regulations of the United Republic of Tanzania.
3. Subject to Clause 1 and to the requirement of any law relating to immigration, the Licensee and its sub-contractor(s) may bring into Tanzania such expatriate personnel as in the Licensee's judgement, required to carry out mineral prospecting operations efficiently and successfully and the Government shall expeditiously provide the necessary work permits and other approvals required for the employment of such expatriate.

WNV

**THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF ENERGY AND MINERALS**

Telegram: "MINERALS"
Telephone: 022 2120568
Facsimile: 022 2120589



754/33 Samora Avenue
P.O. Box 2000
Dar es Salaam

Our Ref. No.: MEM-C/M.100/86B

Makonde Cement Limited
P.O.Box 23418, Dar es Salaam,
Tanzania

Ref. NOTIFICATION OF GRANT OF A MINERAL RIGHT

This is to inform you that your application with Registration No. HQ-P17402, dated 17/12/2007 for a Prospecting License - All Minerals other than Building Materials and Gemstones, at Ndumbwe in Mtwara District, has been granted with modification of the application area, subject to the following conditions

- (i) confirm acceptance of the description contained in Annex A
- (ii) give notice within twenty eight (28) days from the date of this notification of your willingness to accept the proposed license; and
- (iii) pay preparation fee USD 200 or equivalent in Tanzanian Shillings to the Ministry of Energy and Minerals

Failure thereof, your application shall lapse.

Signed this^{1st}.....day of AUGUST.....2008

A handwritten signature in black ink, appearing to read 'Dr. Dalaly P. Kafumu'.

Dr. Dalaly P. Kafumu
COMMISSIONER FOR MINERALS

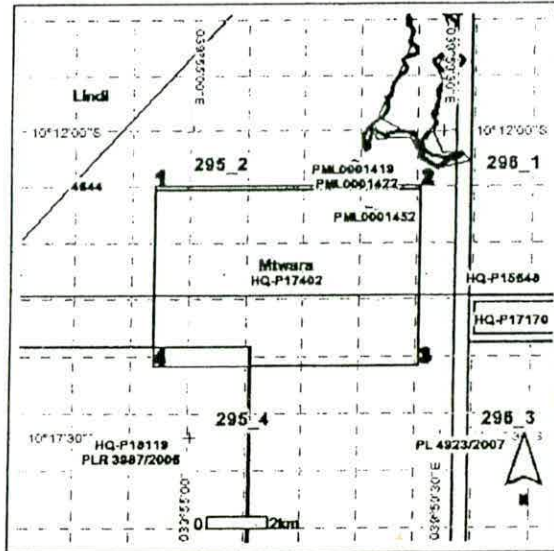
ANNEX A

Application HQ-P17402, Notification of Grant.

Due to partial overlapping with one or more existing licences, previously received applications or reserved areas, your application area, defined by the following coordinates (Arc 1960):

Corner	Latitude	Longitude
1	-10 deg. 13 min. 00.00 sec.	39 deg. 54 min. 20.00 sec.
2	-10 deg. 13 min. 00.00 sec.	39 deg. 59 min. 06.00 sec.
3	-10 deg. 16 min. 15.00 sec.	39 deg. 59 min. 06.00 sec.
4	-10 deg. 16 min. 15.00 sec.	39 deg. 54 min. 20.00 sec.

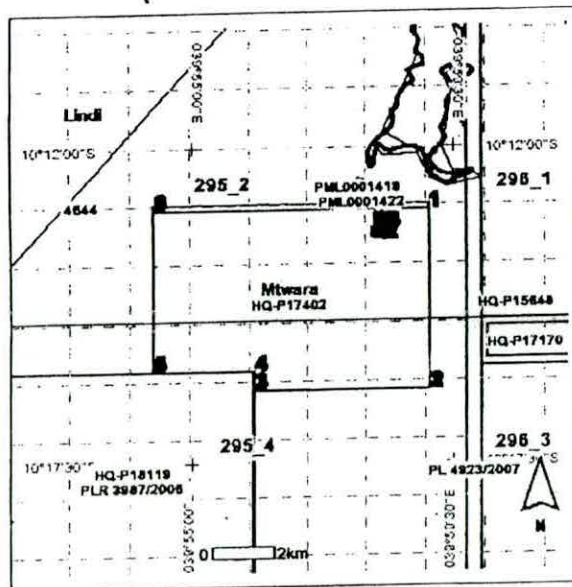
Application No. **HQ-P17402** of **Makonde Cement Limited** at **Ndumbwe** in **Mtwara District**



Legend	
Applied area	
Application number	HQ-P17402
District	Mtwara
Direction	

with an area of 52.12 Square Kilometres, has been modified and your application has been granted for an area that is defined by the following coordinates (Arc 1960):

Corner	Latitude	Longitude
1	-10 deg. 13 min. 05.00 sec.	39 deg. 59 min. 06.00 sec.
2	-10 deg. 16 min. 15.00 sec.	39 deg. 59 min. 06.00 sec.
3	-10 deg. 16 min. 15.00 sec.	39 deg. 56 min. 04.00 sec.
4	-10 deg. 15 min. 55.00 sec.	39 deg. 56 min. 04.00 sec.
5	-10 deg. 15 min. 55.00 sec.	39 deg. 54 min. 20.00 sec.
6	-10 deg. 13 min. 05.00 sec.	39 deg. 54 min. 20.00 sec.
Exclusion of an area covered by valid PLM No 0001451 of 14/06/2000 No 0001452 of 14/06/2000		
1	-10 deg. 13 min. 23.85 sec.	39 deg. 58 min. 07.53 sec.
2	-10 deg. 13 min. 27.11 sec.	39 deg. 58 min. 23.68 sec.
3	-10 deg. 13 min. 38.76 sec.	39 deg. 58 min. 20.86 sec.
4	-10 deg. 13 min. 34.55 sec.	39 deg. 58 min. 07.45 sec.



Legend	
Applied area	
Application number	HQ-P17402
District	Mtwara
Direction	

This is an area of 48.69 Square Kilometres.

3. Resource Assessment by SRK Consulting

**INITIAL ASSESSMENT OF THE LIMESTONE FEED
POTENTIAL OF A PORTION OF THE
PROSPECTING LICENSE GRANTED TO
MAKONDE CEMENT
NEAR NDUMBWE, MtwARA REGION,
SOUTH-EASTERN TANZANIA**

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APPENDICES

**A: NOTIFICATION OF GRANT OF A MINERAL RIGHT
AWARDED TO MAKONDE CEMENT LIMITED**

**INITIAL ASSESSMENT OF THE
LIMESTONE FEED POTENTIAL OF A
PORTION OF THE PROSPECTING LICENSE
GRANTED TO MAKONDE CEMENT
NEAR NDUMBWE, MTWARA REGION,
SOUTH-EASTERN TANZANIA**

DRAFT

CONFIDENTIALITY

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NO PART OF THE CONTENTS MAY BE REPRODUCED BY ANY MEANS WITHOUT THE
PERMISSION OF MAKONDE CEMENT LIMITED

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**INITIAL ASSESSMENT OF THE LIMESTONE FEED
POTENTIAL OF A PORTION OF THE PROSPECTING
LICENSE GRANTED TO MAKONDE CEMENT
NEAR NTUMBWE, MTWARA REGION,
SOUTH-EASTERN TANZANIA**

1.0 INTRODUCTION

SRK Consulting – Eastern Africa (Private) Limited were requested by Makonde Cement Limited (MCL) to undertake an initial assessment of the limestone feed potential, sufficient to supply a cement plant with a production capacity of 130,000 tonnes per annum / 400 tonnes per day, of a portion of the Prospecting License (PL) granted on 1st August 2006, as shown in Appendix A. This mineral exploration tenement, as indicated in **Figure 1**, is situated in the vicinity of Ndumbwe, some ±20 kilometres north of the port of Mtwara, in south-eastern Tanzania. This report compiled is based on:

- Observations made during a reconnaissance visit to the tenement area undertaken from Thursday 24th to Saturday 26th July 2008, and
- Information provided by Makonde Cement Limited.

2.0 QUALIFICATIONS OF CONSULTANTS

SRK Consulting is an international group with over six hundred members of staff that provides expertise in a wide range of scientific and engineering disciplines. The independence of SRK Consulting is ensured by the fact that it holds no equity in any project and that its ownership rests solely with its personnel. SRK Consulting has a demonstrated track record in project evaluation and technical auditing, exploration project design and implementation, mineral resource and reserve estimation, the completion of competent person's reports and the undertaking of independent feasibility evaluations to bankable standards for mining companies and financial institutions worldwide.

This document was prepared for SRK-EA by a Principal Consultant who is a member in good standing of the Australasian Institute of Mining and Metallurgy [AusIMM] and the American Association of Petroleum Geologists [AAPG].

Neither SRK-EA nor any of its staff employed in producing this report have any known beneficial interest in the Project assessed. SRK-EA will be paid a fee for undertaking the work completed in accordance with normal accounting practise.

3.0 OVERVIEW OF THE LIMESTONE FEEDSTONE POTENTIAL OF THE PROSPECTING LICENSE GRANTED

The PL granted, as depicted in **Figure 1**, is bounded by the coordinates listed in **Table 1**. The portion of the tenement which MCL presently requires evaluating, with the intention of establishing a limestone feed resource of ≥ 3.5 million tonnes sufficient to supply a plant producing 400 tonnes of cement per day, is located in the extreme north-east of the concession, **Figure 2**.

The reconnaissance completed over the delineated area indicated that up to ≥ 30 metres of shallowly dipping, predominantly weak to moderately strong, medium to thickly bedded light yellow-brown limestone is present, **Photographs 1 to 4**. Surprisingly, Mafumba and Nyabato (1990), who geologically mapped the Lake Kitere area on a regional scale on behalf of the Geological Survey of Tanganyika, failed to note the occurrence of the extensive beds of limestone exposed in the Ndumbwe area. The limestone, which is frequently overlain by ≤ 2 metres of medium red-brown sand with some clay, **Photographs 2 and 5**, is exploited by artisanal miners for the production of lime, **Photographs 5 and 6**. Some of the lime sold is mixed, as an extender, with Portland Cement used for building purposes.

The XRF analytical results reported by Gowele (2008) on a single grab sample of limestone tested at the Southern And Eastern Africa Minerals Centre, are reproduced in **Table 2**. This supports the observation made in the field that the limestone is probably sufficiently high in calcium oxide and low in magnesium oxide for utilisation as feedstone for cement production. However, considering the low contents indicated, it is probable that material rich in aluminium iron and silica, commonly shale, volcanic tuff, clay, etc., will have to be obtained locally and blended with the limestone in order to ensure that adequate Alumina, Hydraulic and Super Meduli, together with satisfactory Lime Saturation Factors, can be attained during cement production.

4.0 MINERAL CONCESSION STATUS

Copies of the *Notification Of Grant Of A Mineral Right* for the PL were provided by MCL, **Appendix A**. Legal opinion on the validity of the tenement has not been obtained by SRK-EA.

5.0 RECOMMENDATIONS FOR THE EVALUATION OF THE LIMESTONE FEED POTENTIAL OF THE AREA SELECTED BY MAKONDE CEMENT LIMITED

It is recommended that the limestone cement feed potential of the portion of exploration concession delineated for investigation by MCL be primarily investigated by percussion drilling on an offset 400 metre, north / east orientated, grid, **Figure 2** and **Table 3**. This will involve the sinking of 14 percussion boreholes to groundwater level which, if coincident throughout the area of evaluation with the well observed in limestone at UTM Grid Reference: 37L 0606879 / 8870098, probably lies at a height close to mean sea level. In addition, it is recommended that a minimum of two sections be cut down the cliff forming the western boundary of the area for geological logging and channel sampling according to lithology, **Photographs 1 and 2**.

Table 1

BOUNDARY COORDINATES: - PL???,
NDUMBWE, MTWARA REGION, SOUTH-EASTERN TANZANIA

BEACON	Latitude / Longitude		UTM, ARC 1960	
	Latitude (S)	Longitude (E)	Easting	Northing
1	10° 13' 00.00"	39° 59' 06.00"	607 886.39	8 870 569.66
2	10° 16' 15.00"	39° 59' 06.00"	607 868.08	8 864 580.48
3	10° 16' 15.00"	39° 56' 03.56"	602 317.82	8 864 597.06
4	10° 15' 55.00"	39° 56' 03.56"	602 319.60	8 865 211.26
5	10° 15' 55.00"	39° 54' 20.00"	599 169.17	8 865 234.66
6	10° 13' 00.00"	39° 54' 20.00"	599 184.23	8 870 595.14
7	10° 13' 00.00"	39° 57' 51.51"	605 619.81	8 870 576.50
8	10° 13' 00.17"	39° 57' 51.43"	605 617.38	8 870 571.31
9	10° 13' 02.03"	39° 57' 51.43"	605 600.52	8 870 513.75
10	10° 13' 00.00"	39° 57' 58.99"	605 829.14	8 870 575.88

Table 2

DR
XRF Analyses Report By The Southern And Eastern Africa Mineral Centre (2008)
On A Grab Samples Of Limestone

Al ₂ O ₃ (%)	CaO (%)	SiO ₂ (%)	K ₂ O (%)	MgO (%)	P ₂ O ₅ (%)	SiO ₂ (%)	SrO (%)	TiO ₂ (%)	LOI (%)
0.85	54.13	0.13	0.08	0.24	0.02	2.18	0.01	0.04	42.24

Table 3

**PROPOSED DRILLHOLE COORDINATES IN THE AREA SELECTED FOR
CEMENT LIMESTONE FEED EVALUATION IN THE NORTH-EASTERN OF THE PROSPECTING LICENSE
GRANTED NEAR NDUMBWE, MTWARA REGION, SOUTH-EASTERN TANZANIA**

PROPOSED DRILLHOLE	UTM - ARC 1960	
	Easting	Northing
MC8_1	606 658.38	8 869 582.83
MC8_2	606 658.38	8 869 182.83
MC8_3	606 658.38	8 868 782.83
MC8_4	606 658.38	8 868 382.83
MC8_5	606 658.38	8 867 982.83
MC8_6	606 058.38	8 869 582.83
MC8_7	606 058.38	8 869 182.83
MC8_8	606 058.38	8 868 782.83
MC8_9	606 058.38	8 868 382.83
MC8_10	607 458.38	8 869 582.83
MC8_11	607 458.38	8 869 182.83
MC8_12	607 458.38	8 868 782.83
MC8_13	607 458.38	8 868 382.83
MC8_14	607 458.38	8 867 982.83

Following the geological description of the test returns, which should be recovered in one metre intervals, it is recommended that each individual sample be split on site, using a suitable size riffle box, to obtain samples of $\pm 500g$ for analyses. The sample despatched for analysis, together with all the material remaining, need be securely stored for possible further evaluation, should be double-bagged in plastic bags of suitable gauge and size. For identification purposes the sample number should be written in waterproof ink on each bag and on cardboard labels placed inside and attached to the string used for tying the bag closed. In addition to safeguard against loss the samples retained for storage should be placed in polyweave sacks. To facilitate sample identification, only samples from the same borehole being placed in the same sack.

It is considered that it would be suitable for the samples prepared for analyses to be forwarded to the African Assay Laboratory (Tanzania) Limited in Mwanza for forwarding for evaluation by XRF for Al_2O_3 , CaO, Cl, Fe_2O_3 , K_2O , MgO, Na_2O , P_2O_5 , SiO_2 , SO_3 , TiO_2 and LOI (Loss On Ignition). Analytical requirements guaranteed by the laboratory should include:

- Iron free milling
- Fused glass discs be used
- Autoflux bead production
- Sample reduction by spin riffing
- Single flux utilisation
- Re-analysis of all samples with totals not within 98.5 – 101.5%.

In addition, all of the beads analysed, together with aliquots of the powdered sample, should be systematically labelled and made available to MCL on the completion of work.

It is envisaged that the exploration programme proposed will enable tens of millions of tonnes of Measured Resources of cement limestone feed to be delineated in accordance with the Australasian Code For Reporting Of Mineral Resources And Ore Reserves – The JORC Code: Prepared by the Joint Ore Reserve Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (2004), Figure 3. Cement carbonate feed suitability will be assessed taking into consideration the following the specifications for Portland Cements stipulated by the Tanzania Bureau of Standards.

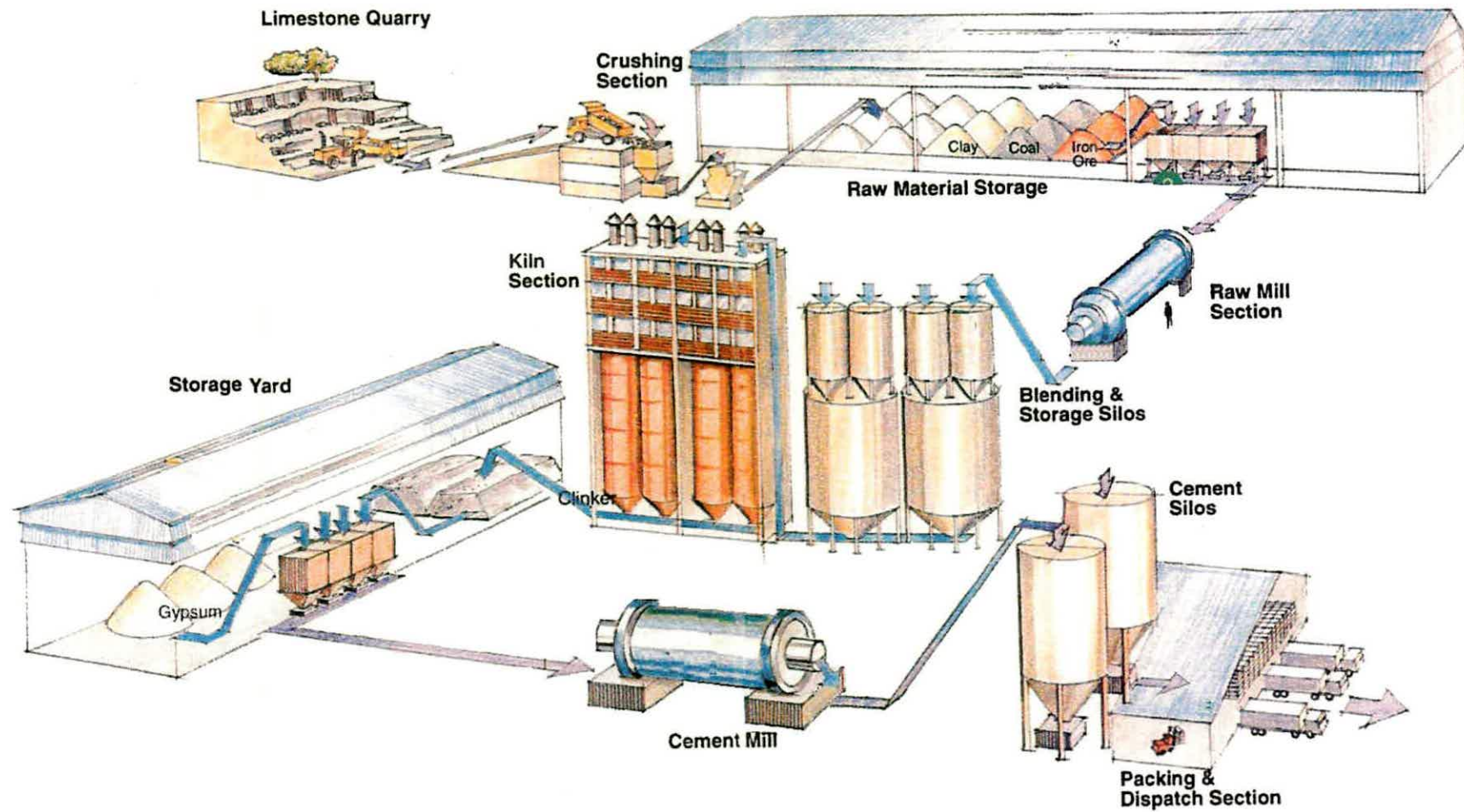
Brent Barber
Principal Geologist
SRK Consulting – Eastern Africa

7th August 2008

6.0 REFERENCES

- Gowele, E. 2008. Limestone – Analysis Of Major Elements By XRF Methods: CH-240-07-519. Unpublished: Chemical Laboratory Report, Southern And Eastern Africa Mineral Centre. 02 January 2008.
- JORC Code 2004. Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code 2004 Edition. Report of the Joint Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).
- Mafwimba, W.Z. and Nyabato, S.J. 1990. Unpublished Geological Map, Quarter Degree Sheet 295 – Lake Kitere (Scale 1:100,000) Geological Survey Of Tanganyika.

4. VSK Cement Plant Layout



5. VSK Cement Plan Description

**NOTE ON A CEMENT PLANT
CONTENTS & TABLES**

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CEMENT PLANTS

This note is aimed at motivating the smaller entrepreneur to establish such cement plants all over the country with a view to accelerate global industrialisation, with economy as the prima-facie.

1. INTRODUCTION :

1.1 Definition of a Cement Plant :

Any Cement Plant installed to produce upto 100,000 tonnes per annum (or 300 tonnes / day) comes into the category of "Cement Plant".

1.2 Concept :

The per capita consumption of cement forms the basis of categorising a country's status of industrialisation and clearly has an impact on the demand - supply charts.

Whereas potential sites need to be explored for setting up cement plants, installation of "Cement Plants " with the above said definition shall go a long way in uplifting the country's status in this era of global industrialisation.

Technology has a major share in the success trials of such plants but economic viability is also a major factor and thereby lesser the investment better are the prospects of survival.

Apart from technology and the economic viability of a plant, due considerations should also be given to uplift the social activities thereby boosting the living standards of the people in the

surrounding area.

Thus setting up large cement plants needs :

- Large Capital investment,
- Longer time for machinery manufacture, supply, erection and commissioning, etc.,
- Larger & sufficient quantity of raw materials,
- Larger power requirement, or capacity to produce the captive power is at a larger magnitude.
- Trained manpower, location, maintenance, modernisation, pollution control, market demand, etc.

All the above factors does contribute and enhances the appreciation "Small is always beautiful".

In Cement Plants therefore the concept is not merely on scaling down, but , determining an appropriate technology under a given socio-economic situation to make it a techno-economically viable unit under the present day situation.

The Quality of cement produced in Cement Plants is comparable to that produced by major cement plants and

are, in line with the International Standards. Such Cement Plants have a distinctive edge over the large cement plants in the following ways :

- Scattered & smaller deposits of limestone, the basic raw material, is very well exploited, which otherwise would be wasted.
- Initial investment is lower as compared to larger plants.
- Can be set up in rural or an under-developed area, thereby creating a good employment potential, which also emphasises the fact that skilled labour is not all a must.
- Smaller entrepreneurs are encouraged in this line of business which is a profit oriented venture.
- Less maintenance and higher yield.
- Quicker realisation of the returns on capital invested because of lower gestation periods.
- Immediate use of by products in certain cases.

Less manpower requirements as compared to larger plants, thus better management and organisational concepts.

2. TECHNOLOGY :

A lot of considerations has to be given on the technology to be adopted in making Cement Plants a success.

A technology which is cost effective, consumes lesser amount of fuel and power will do a lot of good to the smaller entrepreneur by way of saving a huge amount of money that is to be spent on

procuring of the fuel of specific grades and payment of electricity bills for the amount of power consumed unnecessarily.

Broadly speaking cement plants, are set up by adopting either of the following two technologies :

- Rotary Kilns - a rotating, horizontal tube.
- Vertical Shaft Kilns (VSK) - a stationary, vertical, tubular kiln.

With further classification with respect to the process adopted such as dry, semi-dry or wet process, Cement Plants look a lot more healthier with VSK technology being adopted in them, which is a semi-dry process, based on the recent developments.

Also, the operation of rotary kilns of such smaller capacity are difficult and alter the plant layouts too, which has a direct impact on the initial capital investment. The VSK's with a completely automated system of feeding and discharge, are trouble free with least maintenance and have a lesser rate of wear & tear.

Various constant improvements in the field of design of such core equipment have brought a revolution in the Cement Plant equipment manufacturing industry which adopt many cost and power saving techniques and also better the utilisation of the raw materials to achieve better production targets.

The following are a few advantages of VSK based Cement Plants :

- This is wholly indigenous without any dependence on import, either in way of knowhow or machinery and equipment.

Table 1: Plant Capacity and VSK's

Capacity (TPD)	VSK Qty	VSK's Capacity
100	: 1 No.	100 TPD
200	: 2 Nos.	100 TPD
300	: 2 Nos.	150 TPD

- Lower heat consumption
- Operation by personnel without any high level of formal technical qualifications.
- Environmental pollution is minimum
- No water pollution at all.
- Very low maintenance cost.
- Occupies approximately only 1/7 th of the floor space and 1/5th of the civil construction cost when compared with a rotary kiln of similar capacity.

Either Rotary Kiln or Vertical Shaft Kiln(s) can be employed to burn the raw mix into cement clinker. VSK is advantages in case of Cement Plants, because of its advantages as discussed above. However, for capacities beyond 300 TPD, VSK is rarely used as proper burning of raw mix is difficult.

It may be noted here that thermal efficiency of kiln is bad with wet process, good with semi-wet or semi-dry process and better with dry process method of cement manufacture.

The heat consumption value of a VSK is approximately about 900 to 1000 kcal/kg. of Clinker produced based on dry fuel.

In all our plants the following combinations are used to achieve the required Clinker capacities :

Although, core equipments like the crushers, kilns, ball mills, etc., are given due consideration during their selection for a Cement Plant of appropriate capacity, material handling equipments also play a major role in altering the layout of such plants, initial investment, power consumption, ease of working, level of automation, etc. Hence, we have in our VSK Cement Plants an option to incorporate an EOT Crane, thereby adding a new dimension to the material handling system.

Better results are envisaged, even though the initial investment is slightly more in case of an EOT Crane Layout, when compared to a Belt Conveyor Layout, with material piles and tunnel extraction system of material handling in the storage yard.

A "Cement Plant" with vertical shaft kiln(s) offered by us essentially comprises of the following sections :

- Crushing Section,
- Raw Mill Section,
- Blending & Storage Section,
- Vertical Shaft Kiln Section,
- Cement Mill Section,
- Cement Storage & Pkg Section,

3. PROCESS :

The process adopted while setting up a Cement Plant, should have the following inbuilt features :

- Better fuel control
- Wastage of the costlier raw material (fuel), should be minimised considerably
- Kiln control should be easier
- Quality Cement Production
- And other such advantages

The process can be further grouped under the following types based on the condition of the feed material into the kiln. Constant research and development in this area have achieved better results.

The distinct types of processes adopted in Cement Plants are :

- Wet Process : Kiln feed is in a slurry form.
- Semi wet Process : The slurry is dried into cake and then fed into kiln.
- Dry Process : Kiln feed is in the form of dry powder.
- Semi dry process : The dry powder is converted into nodules by spraying water and these nodules are then fed into the Kiln.

(VSK is a semi-dry process)

In all our VSK Cement Plants, which employs the semi dry type, all efforts are made to best suit the entrepreneurs, thus enabling them to exploit the prevailing conditions and further to uplift the socio-economic conditions of the locality and the nation.

Generally the fuel (Coke Breeze) is proportionately mixed alongwith other raw materials, ground to the required fineness in the raw mill, blended together to form the raw meal and is nodulised before it is fed into the vertical shaft kiln(s).

4. RAW MATERIALS :

The major raw materials required for producing Ordinary Portland Cement (OPC) are :

1. Lime Stone,
2. Clay,
3. Low volatile coal/ Coke / Petroluem Coke / Coke Breeze,
4. Gypsum,
5. Additives,
(Iron Ore, Laterite or Bauxite for correcting the raw mix)

The raw materials preferred for the plants offered by us are as under :

1. Limestone : Cement grade limestone with CaO above 48%, SiO₂ below 8% and MgO below 3%.
2. Clay : Clay with required silica content and with good binding quality.
3. Coke Breeze : Low volatile, high calorific value coke breeze with ash content ranging between 25-30% & VM < 10%.
4. Gypsum : To be added along with Clinker while grinding to obtain cement Mineral / Natural, Chemical, Marine gypsum are the three different forms of gypsum available.

Out of these Natural Gypsum is the best suited, Chemical Gypsum can be used as an alternative here as Marine Gypsum is not recommended.

5. Additives : To compensate the deficiencies of iron & silica in the raw mix iron ore, mill scales, laterite, sand stone, bauxite, etc are such additives required to ensure a proper raw mix to produce quality cement.

The approximate weekly requirements of the raw materials and fuel are given below :

Table 2 : Weekly Raw Materials and Fuel Requirements.

Raw Material	Plant Capacity		
	100	200	300
Limestone	910	1820	2730 T
Clay	140	280	420 T
Gypsum	36	72	108 T
Additive	24	48	72 T
Coke Breeze	140	280	420 T
Water	175	315	525 Cum

However, a minimum stock of these materials should be kept in the factory premises to ensure smooth functioning of the plant.

The approximate stock requirements of the raw materials and fuel are given below :

Table 3 : Minimum Stock of the Raw Materials and Fuel.

Raw Material	Plant Capacity		
	100	200	300
Limestone	3600	7200	10800 T
Clay	600	1200	1800 T
Gypsum	108	216	324 T
Additive	300	600	900 T
Coke Breeze	1800	3600	5400 T

Sometimes either Slag or Pozollona is also added alongwith Clinker and Gypsum to produce Portland Slag Cement or Pozollona Cement. The quantities required depend on the percentage of slag or pozollona added. Equivalent stock has to be maintained for smooth functioning of the plant.

5. FUEL :

Ordinary coal containing high volatiles will burn with flame and heat will be lost if employed in VSK. Hence, coke with less than 10% volatile matter is generally used in VSK cement plants. You can also use petroleum coke as fuel.

Where coal is readily available, a devolatilising unit may be employed to reduce the volatile matter in the coal. The product can be used in vertical shaft kiln firing, as well as domestic coke for cooking purposes.

6. MANUFACTURING METHOD :

Limestone is brought to the factory in 200 mm size pieces. This is reduced to about 60 mm pieces in a Primary Jaw Crusher and then passed into a Secondary Hammer Crusher (Reversible Impactor) to reduce it to below 20 mm pieces and stored in a Storage Yard. Clay, Additive and Coke Breeze are also stored in their respective bays. Generally, these materials are procured in below 20 mm size and hence do not require crushing. However if required they can be passed thro' the Secondary Crusher before being stored.

The Raw Materials viz., Limestone, coke breeze, clay, additives, are then extracted in the correct proportions and are fed into a Ball Mill (Raw Mill) where they are ground to a fineness of 87% passing 170 mesh.

The extraction system is by means of Table Feeders. Electronic Weigh Feeders - high accuracy equipments, can also be offered as optional extraction equipments in place of Table Feeders to get a better and highly accurate raw mix.

The Raw Mill Circuit can either be an Air Swept, Closed Circuit with a Mechanical Classifier or an Open Circuit Mill.

Raw Mill with a Mechanical Classifier (Dynamic Air Separator) is recommended by us for the following advantages :

- Better grindability,
- Increase in output,
- Less power consumption,
- Easy operations,
- And many other advantages.

The ground raw mix from the raw mill is homogenised pneumatically within the Blending Silos and then stored in a Raw Meal Storage Silo.

The raw meal is then elevated to a noduliser hopper (constant head) from where it is extracted in correct quantity with the help of a variable speed Screw Feeder and is fed into a Noduliser.

By wetting the raw meal in noduliser, nodules are formed which then passes into the Vertical Shaft Kiln.

Drying, Pre-heating, Sintering and Cooling of clinker takes place in the Vertical Shaft Kiln. Well burnt Clinker is then stored in the open Storage Yard is allowed to naturally cool for about fifteen days.

Clinker and about 5% Gypsum are ground into fine powder in the Cement Mill which is what we call Ordinary Portland Cement. (OPC).

We can offer Cement Mills with either a Closed Circuit or an Open Circuit arrangement.

Cement stored in Cement Silo(s) is packed into HDPE bags. Cement bags are stored in the godown and despatched by truck to the consumer according to demand.

The capacity requirements of the various sections of a Cement Plant as recommended by us are as follows :

Table 4 : Recommended Sectionwise Capacity Requirements.

Section	Plant Capacity (TPD)		
	100	200	300
Crushers	15	30	75 TPH
Stock	7	7	7 Day
Raw Mill	10	20	30 TPH
Blending Silo	50	100	300 T
Storage Silo	2	2	3 Day
100 tpd VSK	1	2	- Nos
150 tpd VSK	-	-	2 Nos
Clinker Stock	15	15	15 Day
Gypsum Stock	15	15	15 Day
Cement Mill	7	14	20 TPH
Cement Silo	5	5	5 Day
Packing m/c	15	25	45 TPH

7. POWER :

Upto the plant capacity of 150 tpd, all the motors are rated for 440 Volts, 3 Phase, 50 Hz Power supply. However, for 200 tpd plant, raw mill and cement mill motors are rated for 6600 Volts, 3 phase, 50 Hz. Power Supply, other motors are rated for 440 Volts. Plant light fittings are to be rated for 220 Volts.

It is recommended that high tension (HT) lines (33 KV or 22 KV) should be directly drawn to the plant from the substation of the Electricity Corporation to avoid the voltage fluctuations. The factory should have a sub-station with a suitable transformer and control panels.

The Transformer requirements are as indicated below :

Table 5 : Transformer Capacity.

Transformer Ratings (kVA)	Plant Capacity TPD		
	100	200	300
33 kV/440V	1600	1600	1600
33 kV/6600V	—	1600	2000
440 V/220V	See Note Below.		

Note:

- Quantity : 1 No.
- For connecting to lighting line many of the main transformers will be having neutral line. If that is not provided, the 440 V/ 220V transformer will be required.

**TO PRODUCE A TON OF CEMENT
100 < 115 kWhr (UNITS) OF POWER
SHALL BE REQUIRED.**

8. DUST POLLUTION :

The dust emissions are generally low in Cement Plants due to adequate practices, such as use of high efficiency dust collectors & good house keeping etc.

Dust control equipment are provided wherever required to keep the pollution level below 150 mg / Nm³ in the factory building. However, due to the nature of the plant, fine dust particles will be carried along with wind causing nuisance. It is recommended that trees are planted providing a green belt within the plant to suppress dust nuisance.

Efficient Pollution Control equipments comprising of Reverse Jet or Pulse Jet Bag Filters are recommended in each of the sections of the Cement Plants offered by us to maintain a very low dust emission level and to have a good control over the environmental aspects.

In Vertical Shaft Kiln Section, the smoke emission from the kiln chimney (which is kept at about 30 m ht. from the ground level) negligent quantities of Carbon mono Oxide, Carbondioxide & dust along with sizeable quantity of steam are left out the atmosphere. In normal course, since the plant is located is away from dense population, no pollution control equipment need be installed. However in our plants, we

are providing a wet scrubber arrangement to reduce this.

If the conditions stipulates dust emission should be below 150 mg/Nm³ and or chimney smoke to be arrested, costlier dust collector system such as electro static precipitator / large bag house to be installed and we have not considered the cost of providing this as it will cost exorbitantly more and may make the project un-viable.

9. WATER SUPPLY :

Water is an essential commodity in a Cement Plant.

A Ground Water tank and an Over Head tank on the VSK building with suitable pumping arrangement with piping to mill buildings and VSK building are to be provided. Raw Mill bearings are water cooled in summer & Cement Mill bearings, shell are to be water cooled always while running. The VSK building requires water supply to wet the raw meal to produce nodules. Apart from this laboratory and toilets require proper water supply.

The following guidelines will be useful to decide on the water requirements :

Table 6: Water requirements.

Description	Plant Capacity (TPD)		
	100	200	300
(Figures in Thousands -- '000)			
Required/day Tank Capacity:	25	45	75 Lit
Ground	30	60	90 Lit
Overhead	25	50	75 Lit

Pump for Tanks:

Ground	8	16	24 Lit/h
Overhead	8	16	24 Lit/h

Land required for the project :

Keeping in view of expansion, It is advisable to go for 15 - 20 acres of land which includes Main Plant, Administration, Workshop Building, Provision for expansion & essential Housing. (1 Acre -- 4047 sq mts)

10. MAN POWER :

Labour is a major force in any industry, in spite of automation, for having control over the equipments, maintenance, etc.

The table given below indicates the minimum manpower requirements in a Cement Plant.

Table 7 : Manpower Requirements.

Description	Plant Capacity (TPD)		
	100	200	300
Officers	13	13	15
Skilled men	74	82	88
Casual Labour	6	15	20
Total	93	110	123

11. CONCLUSION :

This note should go a long way in giving certain guidelines for an entrepreneur in establishing a Cement Plant. For more information we propose a personal meeting to exchange the views.

\$

**Approximate
Raw Material Requirements
Per Ton of Cement Produced
(for a VSK Based Cement Plant)**

1. Limestone with CaO > 48%, SiO ₂ < 7%, Al ₂ O ₃ } as may be required to Fe ₂ O ₃ } satisfy the moduli values of raw mix, MgO preferably < 2.5%,	1.40 Tonnes
2. Coke Breeze # Low Volatile Coal with Volatile Matter less than 10%. Having calorific value more than 5,000 kcal/kg. # Alternatively, Petroleum coke can also be used.	< 0.20 - 0.25 Tonne
3. Clay of suitable grade to satisfy the Silica modulus in cement	< 0.15 - 0.20 Tonne
4. Additives	0.05 Tonne
5. Gypsum	0.05 Tonne
6. Power	100 < 115 kW hr (Units)
7. Process Water	250 - 300 Litres
8. Packing Material - 50 Kg Bags (Paper / HDPE)	20 Nos.

6. Advantages of Small Plant vs Big Plant

RATIONALE FOR SMALL PLANT SIZE

A. SMALL 100,000 Tonnes / Year CEMENT PLANT

1. Is of VSK (vertical stack kiln) design – simple & low emission design
2. Produces 400 tonnes / day
3. Consumes 4.6 mw of power – well within the Artumas present capacity
4. Uses 75,000 litres of water / day - 3 boreholes will be drilled to adequately supply the factory minimal needs as well supplying the surrounding villages which will also benefit from this water supply system.
5. Due to the non requirement of town water for this project it will therefore not impact on or hinder growth potential of the Mtwara town and immediate surrounding areas.
6. Will be able to adequately supply ALL CEMENT needs for Mtwara, Lindi and Ruvuma Regions as well as supply immediate needs of surrounding of Northern Mozambique and allowing for future growth in the regions.
7. Will take only 18 months to construct – will be ready for production by November 2009
8. Will have a very cost effective price of cement – approximately 60% of present prices that will allow for early excellent growth of industry from end 2009.
9. EIA will show that there will be a minimal degradation of the area – requiring only 3.0 million tonnes of raw lime deposit over 20 years – therefore will not destroy the environment which will be contained within a small area.
10. Will employ directly 185 people and indirectly another 150 to 200 people.
11. Will require only 14 trucks / day to have products collected (13,860 axles loads / year – or 277,200 axle loads over lifetime of factory – well within road design limits).
12. Will therefore not destroy road and other infrastructure as present facilities are adequate
13. Will not require specialised port handling facilities – present facilities are adequate
14. Have already agreed with small scale miners / workers to supply their products on subcontract basis should they so wish – especially relevant to gypsum products
15. Will set up small workers groups in gypsum product processing and manufacture specialised products to supply Government and Private Sector education and health sectors with locally produced requirements, such as school chalk sticks, POP (Plaster of Paris) and other products.
16. Will train 25 technicians
17. Will outsource technical skills such as electrical, mechanical and civil works as and when these skills become available in the region.

B. LARGE 2,000,000 Tonnes / Year CEMENT PLANT

1. Will be traditional horizontal kiln design and unless very major costs in pollution controls are strictly enforced up to 100 tonnes / day of emissions could be pushed in the air which will effect the surrounding villages as this type of design has done in other
2. Produces 6060 tonnes / day
3. Consumes 70 mw of power – more that the present design of Artumas' intended supply of power to rural communities – therefore could hinder rural electrification supplies by giving preference to a large consumer.
4. Consumes 1,100,000 litres of water / day - will require major upgrade of present water supplies and a pipeline to the factory – a major infrastructure costs that will effect water tariffs to recover these costs and where does the money come from?
5. Will require a gas pipeline from Mtwara to site – another major EIA degradation issue to be dealt with.
6. Will be designed for preferential export orders - but will this adequately supply Mtwara, Lindi and Ruvuma Regions if export orders become priority?
7. To meet competitive pricing of exports will locals pay the price for higher cost cement to parallel cement prices ex Dar and Tanga?
8. Will require extensive infrastructure construction work for port and harbour handling to be upgraded to more than 5 times present export capacity – who will undertake this work and where will the finance come from?
9. Will take 4-6 years to complete EIA, SIS & to construct – what happens to costs of development in Mtwara & Lindi in the interim period at a present cost of cement at US\$ 20/pocket?
10. EIA will show that there will a maximum degradation of the area – requiring over 55 million tonnes of raw lime deposit over 20 years – therefore will have a major impact on the surrounding areas destroy the environment which will be contained within a small area.
11. Will require over 250 trucks / day to move product from factory to port in Mtwara - (247,500 axles loads / year – nearly the total axle loads the small plant will use in its entire LIFE! or 4,950,000 axle loads over lifetime of factory – a new road will have to be constructed to take these axle loads!).
12. Road & Port congestion will be a major problem in Mtwara and will require complete town planning redesign and construction to cope with such large truck numbers every day. Who pays for this additional requirement?
13. Road will be destroy road very quickly and will require immediate reconstruction – which donor will contribute to this reconstruction work when other development options need to be considered.
14. Will require specialised port handling facilities – who pays for this and how long will it take?

7. Letter from Artumas re: Power Supply



AG & P GAS LIMITED

www.artumas.com

Plot 8/1, Tumbawe Street, Oysterbay
P.O. Box 203, DAR ES SALAM
TANZANIA

Tel: +255 22 266 6622/266 7318
Fax: +255 22 266 8700
Email: info.tz@artumas.com

19th August 2008

Mr. Neil Garden
Makonde Development Company Ltd
P. O. Box 767
Mtwara

Dear Sir:

Re: Power and Energy Requirements for Makonde Cement

We acknowledge receipt of your letter of July 14, 2008 addressed to Brock Buchanan. We are fully supportive of your initiative to develop a cement plant in the Mtwara Region and will assist in any way we are able to ensure success of your venture.

We note your projected power requirements of 0.5 MW in December 2008, increasing to 0.75 MW in March/April 2009, reaching a demand of 2.0 MW in July/August 2009. We can assure you of sufficient available capacity from our Mtwara Generation Station to supply your load forecast.

We are currently focused on the design and construction of distribution facilities to interconnect all isolated networks in the region. Artumas expects to assume operational control of the Transmission and Distribution in August 2009. In the meantime TANESCO retains control over those areas, and it is with TANESCO that you should arrange the necessary supply contracts. If there is any assistance we can provide to support your dealings with TANESCO, please do not hesitate to let us know.

Once we assume operational control of the Mtwara / Lindi Regions, we will immediately seek to enter into mutually agreeable power supply contracts with Makonde.

If you require any further clarification, please do not hesitate to contact me directly.

Yours sincerely

Richard Tainton
Managing Director

8. EIA Letter from ENATA

MAKONDE CEMENT LTD

PROJECT BRIEF FOR THE PROPOSED 400TONS/DAY CEMENT FACTORY IN NDUMBWE WARD, MTWARA REGION.

SUBMITTED TO:
THE DIRECTOR GENERAL
NATIONAL ENVIRONMENT MANAGEMENT COUNCIL (NEMC)
TANCOT HOUSE 3rd FLOOR, SOKOINE DRIVE
P.O.BOX 63154, DAR ES SALAAM-TANZANIA.
E-Mail nemc@nemctz.org

PREPARED BY:
ENVIRONMENTAL ASSOCIATION OF TANZANIA (ENATA)
OLD BAGAMOYO RD. PLOT/BLOCK No. 493 1st FLOOR NEXT TO SHOPPERS PLAZA
P.O.BOX 13585, DAR ES SALAAM-TANZANIA
Tell 255 22 2775971
Mobile 0713 321 758
E-Mail enata.2007@yahoo.com

August, 2008

1.1 Introduction.

Makonde Cement Ltd is a registered company with certificate of incorporation No. 63428 dated 12th December 2007. The company plans to establish a 400tons/day cement factory in Ndumbwe ward, Mtwara region to cater for the southern regions of Mtwara, Lindi, Ruvuma and some for export to Mozambique and Malawi

1.2 Nature of the project

The project will mainly produce cement products at low costs and will use a small plant, technically state of the art, which requires lower initial investment and less maintenance but higher yield and which can provide quicker realization of the returns on capital invested. The project will also include other supportive facilities like staff houses, offices and parking area.

1.3 Location of the project

The cement plant will be located at Ndumbwe ward in Mtwara region which is approximately 1.7km from Lindi-Kilwa road and about 14km from Mtwara port.

1.4 Activities

The activities will occur in three main phases namely

Construction phase; Site clearance, site fencing, site leveling, land excavation, construction of temporal camps, design and engineering, construction of the cement milling(grinding)unit, construction of raw material storage silos and cement silos.

Operation phase; Running of the cement mill, packing unit, raw material transportation and handling, product (cement) dispatch, transportation, storage maintenance of staff houses and other supportive facilities.

Decommissioning phase; Follow the land act no 4 of 1999 by returning the land into a state that would be usable by other (community) after the project completion.

- Rehabilitation and revegetation of all cleared sites
- Holding seminars to employees to prepare them psychologically before the decommissioning phase starts
- Form an all exclusive decommissioning committees comprising all the stake holders and the senior government officials, community and the workers
- Auction machinery and equipment of useful value and those non useful be availed to smelters.

1.5 Design of the project

The project desires to adopt Vertical Shaft Kiln technology. VSK based cement plant essentially comprises of the following sections;

- Crushing section
- Raw Mill section
- Blending and Storage section

- Vertical Shaft Kiln section
- Cement Mill section
- Cement Storage and Packaging section

1.6 Construction material source and Storage

The main plant equipments will be imported by the company as design and technology transfer to Tanzania, the contractor will train the local engineers to fabricate some parts locally during the construction phase

Liquid waste disposal; Septic tank and soak pits will be constructed to hold waste water for treatment

Solid waste disposal; Solid waste emanating from the construction will be collected, sorted in containers and later released or disposed through authorized companies with statutory regulation.

Materials; The material to be used are classified into project phase and some materials may be used in all the phase they includes

- **Construction phase material;** building sand, cement, steel concrete, wood, timber, iron, sheets
- **Operation phase material includes;** clinker, gypsum, pozzolana, energy
- Project products; Ordinary Portland Cement

1.7 Potential impacts during construction and operation phase

- Employment opportunities to local people
- Business will grow around the project location
- The project will increase cement supply into the market
- Increase in traffic flow which will lead to increases in fugitive dusts
- Income and revenue generation to national economy through payment of taxes
- Dust and air emissions into the environment
- Noise and vibration
- Occupational accidents at the work place
- Clearing of existing vegetation

1.8 Mitigation measures for the impacts includes

- Cover all the trucks with canvas and load truck capacities
- Use modern technology in putting up the plant and right from the design stage
- Use personnel protective equipments
- Carry out risk assessment of the project at every stage and conduct safety awareness seminars on site post warning signs around the plant especially in high risk areas
- Carry out landscaping and backfilling around the plant

- Set a side vehicle packing and control truck movement in and out of the place at a speed of 10km/hr

1.9 Action plan for prevention and management of possible accidents during the project cycle

- Design for safety during the plant design stage and implement it throughout the all project phases
- Carry out risk assessment at every phase of the project
- Carry out emergence preparedness drills/ programme, hygiene programmer, communication and training

1.10 Health and Safety of workers and neighbouring communities

The company will strive to abide by the Occupational Safety Health Act guidelines to make sure the company workers and the neighbourer are safe. The company will interact with the community (Ndumbwe ward) and create awareness on the company progress and programmes through corporate social responsibility.

1.11 Economic and Social-Cultural impacts to the local community and the entire nation in general

The proponent takes into account environmental concern and builds them into the project design so that the proposed cement plant is in harmony with the local environment. Other national policies includes the National Strategy for Growth and Reduction of Poverty (MKUKUTA) that promotes growth and reduction of poverty, the creation of jobs and the multiplier effect arising from the proposed project will stimulate income generation to local people, the district and national level which will be a contribution to the poverty reduction efforts.

On job training for specific skills will be impacted to few workers so that they understand the contribution work in professional way as per the plant design.

1.2 Project budget

The project construction to commissioning cost will be USD 10.32.

9. Project Manager Letter from BISH

BISH

TANZANIA LIMITED
Quantity Surveyors and Project Managers

KINONDONI ROAD, P.O. BOX 1821, DAR ES SALAAM
Tanzania

Tel: +22 2667044/ 2667764

Mobile: 0748 270561

Fax: +22 2666489/2775630

Email: bish@cats-net.com/sarkodie@cats-net.com

CYGS/AM/001/1498
8th August, 2007

Makonde Cement Ltd,
P.O. Box 767,
MTWARA

Attn: Mr. Neil Garden

Dear Sir,

PROPOSED NDUMBWE CEMENT FACTORY, MTWARA

Project Management Services

Further to our recent meeting and your letter dated 2nd August, 2008, we accept to be commissioned by you as your Project Manager for the above Works subject to your approval of our technical and financial proposal outlined below:

We understand that you require the services of project management inclusive of Civil, Quantity Surveying, Electrical and Engineering Services with regard to the Civil Works on your proposed 400 tons per day cement factory in Ndumbwe, Mtwara. The services to be provided by us shall be as follows:

A. **Project Management**

Our services for project management shall be as follows:

Agents of Makonde Cement Ltd. and shall be responsible for the administration, management and communication co-ordination of the project, inter alia:-

- a) communicate to the Consultants including Movers Ltd from India (the manufacturers of the process plant) the requirements of Makonde Cement Ltd. brief;

- b) monitor the progress of design work and the achievement of function by reference to Makonde Cement Ltd. .
- c) monitor and regulate programme and progress;
- d) monitor and use our reasonable endeavours to co-ordinate the efforts of all Consultants, advisers, Contractors and Suppliers directly connected with the project;
- e) monitor the cost and financial rewards of the project by reference to Makonde Cement Ltd brief..
- f) shall not without the prior written consent of Makonde Cement Ltd. give to the main or any other Contractor or any Supplier or any other person any instruction the necessary effect of which would be materially either to vary the project or to increase the cost of or the time taken to complete the project.
- g) shall promptly inform Makonde Cement Ltd. in writing of anything the likely effect of which we believes would be materially either:
 - a) to vary the project; or
 - b) to increase the cost of the project or change its financial viability, quality or function; or
 - c) to increase the time taken to complete the project.
- h) shall not be responsible for any forecasts of financial viability unless prepared by us;
- i) shall not be responsible for the Makonde appointed Consultant's designs and technical co-ordination thereof;
- j) shall not be responsible for the advice or recommendations that may be provided by any Consultant or adviser appointed by Makonde Cement Ltd. .

B. Civil, Quantity Surveying, Electrical and Engineering Services

The services to be provided by us at each stage shall comprise the following as may be necessary in the particular case:-

1. Design Stage 1 (Preliminary or Sketch Plan Stage)

- a) Visiting the site and investigating/studying data and information relevant and relating to the project and particular Works which are reasonably accessible to us and considering any reports relating to the Works which have either been prepared by us or prepared by others and made available to us by Makonde Cement Ltd.
- b) Advising Makonde Cement Ltd. on the need for arrangements to be made for the carrying out of topographical and dimensional surveys of

the site which may be necessary to supplement the topographical information already available to us.

- c) Advising the Makonde Cement Ltd. on the need to carry out any geotechnical investigations which may be necessary to supplement the geotechnical information already available to us, arranging for such investigations when authorized by Makonde Cement Ltd., certifying the amount of any payments to be made by Makonde Cement Ltd. to the persons or firms carrying out such investigations under our direction, and advising Makonde Cement Ltd. on the results of such Works.
- d) Advising Makonde Cement Ltd. on the need for arrangements to be made for the carrying out of special surveys, special investigations or model tests, and advising Makonde Cement Ltd. of the results of any such surveys, investigations or tests carried out.
- e) Providing sufficient preliminary structural information by means of advice, sketches, reports or outline specifications to enable the production of outline proposals and to assist us in finalising the preliminary cost estimate.
- f) Consulting any local or other authorities on matters of principle in connection with design of the Works.

2. Design Stage II (Detail Design and Tender Stage)

- a) Developing detail design of the approval scheme design of the Works in collaboration with other members of the design team and preparing calculations, drawings, Specifications and Civil Engineering Bills of Quantities for submission to any appropriate authority.
- b) Advising on the conditions of contract relevant to the Works and forms of tender and invitations to tender as they relate to the Works.
- c) Advising Makonde Cement Ltd. as to the technical suitability for carrying out the Works or persons and firms tendering for the main contract and for any specialist sub-contract involving the supply and/or installation of parts of the Works.
- d) Preparing any further designs, specifications and drawings including bar bending schedules, necessary for the information of the Contractor to enable him to carry out the Works.
- e) Examining shop fabrication drawings prepared by Contractors or his Sub-Contractors or Suppliers for the Works, or any part thereof, in respect of general dimensions and structural adequacy of members and connections.
- f) Assisting Makonde Cement Ltd. where necessary in advising the relative merits of tenders, prices and estimates received for carrying out the Works.

C. **Supervision of Works**

We shall not accept any tender in respect of the Works unless Makonde Cement Ltd. gives him instructions in writing to do so, and any acceptance so made by us on the instructions of Makonde Cement Ltd. shall be on behalf of Makonde Cement Ltd. We also proceed to render the following services.

- a) Advising on the preparation of formal contract documents relating to accepted tenders for carrying out the Works or any part thereof.
- b) Advising Makonde Cement Ltd. on the need for special inspection or testing.
- c) Advising Makonde Cement Ltd. on the appointment of site supervisory staff in accordance.
- d) Advising Makonde Cement Ltd. in examining the Contractor's construction proposals and programmes where required by contract documents.
- e) Preparing additional or revised bar bending schedules, drawings or any further designs which may be necessary.
- f) Attending relevant site meetings and making such other periodic visits to site. To monitor that the Works are being executed generally in accordance with the drawings and specifications and otherwise in accordance with good engineering practice.
- g) Giving all necessary instructions to the Contractor, provided that we shall not without the prior approval of Makonde Cement Ltd. give any instructions which in the opinion we are likely substantially to increase the cost of the Works unless it is not in the circumstances practicable for us to obtain such prior approval.
- h) Advising on interim valuations, issuing certificates for payment to the Contractor where appropriate and advising on the settlement of the Contractor's final accounts.
- j) Approving and supervising the Contractor's commissioning procedures and performance tests and inspecting the Works on completion.
- k) Performing any other services which we may be required to carry out under any contract for the execution of the Works.
- l) Delivering to Makonde Cement Ltd. on the completion of the Works, copies of design and construction drawings, Contractor's operating instructions, manufacturer's manuals, certificate of works tests and any other documents supplied to the Contractor for the purpose of

constructing the Works and all records as are reasonably necessary to enable Makonde Cement Ltd. to operate and maintain the Works.

- m) Assisting Makonde Cement Ltd. in settling any dispute or difference which may arise between Makonde Cement Ltd. and the Contractor provided that such assistance shall not relate to the detailed examination of any financial claim and shall not extend to advising Makonde Cement Ltd. following the taking of any step in or towards any arbitration or litigation in connection with the Works.

D. **Remuneration for Services**

Our remuneration for the Services under Items A & B above shall be as follows:

- (a) Project Management Services under Item A above
10% of all the payments to persons or firms carrying out services under our directions.
- (b) Civil, Quantity Surveying, Electrical and Engineering Services under Items B and C above
In accordance with Association Consulting Engineers Tanzania Scale (ACET 1992); Table 2: four percent (4%) of the construction cost of the civil works plus reimbursable and expenses.
- (c) Time charges

Additional Services shall be charged on time basis on the following monthly rates:

i)	Project Manager	US\$	8,000.00
ii)	Project Architect	US\$	8,000.00
iii)	Project Engineer	US\$	8,000.00
iv)	Project Quantity Surveyor	US\$	8,000.00
iv)	Resident Architect	US\$	4,500.00
(v)	Back Stopper	US\$	8,000.00

We trust that our above proposal will be of interest to you and will be happy to discuss the different point in detail with you and enclosed herewith our Company Profile as requested.

Yours faithfully,
BISH TANZANIA LTD.

C.Y.G. SARKODIE
MANAGING DIRECTOR



*Promoting Environmental,
Social & Economic
Sustainable Development*

MAKONDE CEMENT LIMITED

**P. O. Box 23418
Dar es Salaam
TANZANIA**

**Phone: +255 22 266 6617
Fax: +255 22 266 7148
Mobile: +255 76 294 2346**

FEASIBILITY STUDY

**FOR THE ESTABLISHMENT
OF
A**

400 TON/DAY CEMENT PLANT

AT

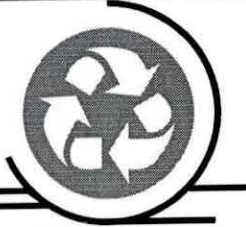
NDUMBWE,

**MTWARA REGION,
TANZANIA**

PREPARED BY:

MANT CONSULTANTS

October 2008



*Promoting Environmental,
Social & Economic
Sustainable Development*

MAKONDE CEMENT LIMITED

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FEASIBILITY STUDY FOR THE ESTABLISHMENT OF A 400 TON/DAY CEMENT PLANT AT NDUMBWE, MTWARA REGION, TANZANIA

PREPARED BY:

MANT CONSULTANTS

October 2008

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1.0 EXECUTIVE SUMMARY

1.1 Background and Purpose of study

1.1.1 The decision to carry out a feasibility study on the proposed establishment of a cement plant in Tanzania was initiated in September 2007 by Makonde Cement Limited, a company that has been registered and incorporated for the purpose of implementing this project.

1.1.2 Prior to making any decision to set up the cement plant at Mtwara in Tanzania, careful investigations with regard to the present and the future market identified in the DBSA Mtwara Corridor SDI Programme was seriously considered when looking into future expansion of markets & infrastructure. In addition, there was a need for a full investigation on the technical feasibility and the financial economical viability of the project, results of which are contained in this feasibility study report.

1.1.3 These results of the feasibility study prove that the project is technically feasible in Mtwara, Tanzania, and that the existing market will continue to exist and grow in future especially as the region has reliable gas and power from the Artumas sources in Mnazi Bay. Hence the project viability in both financially and economically aspects and over and above all this, the study proves the necessity and importance of the establishment of another cement plant in the southern part of Tanzania. This is mainly due to existing suppliers delivering cement sporadically by road or ship to Mtwara from Dar es Salaam or Tanga some 6-900 kms away as and when surplus cement is available.

1.1.4 Careful consideration was also given to obtaining a plant that was small, technically state-of-the-art, requires lower initial investment, could be set up in an underdeveloped rural area, required less maintenance but could give higher yields that could provide quicker realization of the returns on capital invested.

1.1.5 Movers (India) Ltd (a specialist company in India) was such a vendor identified who is presently actively involved in the design, manufacture and construction of small cement plants that are technically competitive and suitable for the project in Tanzania. Movers have already successfully supplied and installed similar plants in Kenya and Malawi and presently working on additional plants in Botswana and Malawi and looking at supplying in the near future to Mozambique and South Africa.

1.1.6. The purpose of this study is to facilitate an appraisal by lending financial institutions and Makonde Cement Ltd investors. The document details out technical, marketing and financial aspects of a proposed cement plant that is to be located at Mtwara

1.2 The Tanzania Cement Industry

1.2.1 Tanzania currently consumes between 1,650,000 – 1,800,000 tonnes of cement annually. This demand is expected to increase in the coming years.

1.2.2 Currently, there are three organizations that produce cement in Tanzania, namely Twiga Cement, Tanga Cement & Mbeya Cement and their combined production is in the region of 1, 2 to 1.4m t/year. The balance of cement is imported from various overseas suppliers as well as within the SADC & COMESA regions.

1.2.3 The marketing of cement in the region will be covered in two areas

- By selling into the Mtwara, Lindi and Ruvuma Regions where the present demand is approximately 78-84,000 tonnes / year plus export into the region of approximately 44-53,000 t/ year and both areas growing at an annual rate of approximately 6.5%.

1.3 Definition of a Cement Plant

1.3.1 Any Cement Plant installed to produce up to 130,000 tonnes per annum (or 400 tonnes/day) – until recently defined as up to 100,000 t/year or 300 t/day, comes into the category of “Small Cement Plant”. The quality of cement produced in these Cement Plants is comparable to that produced by large cement plants and are in line with the International Standards. Such Cement Plants have a distinctive edge over the large cement plants in that:

- i) They can be set up in rural or undeveloped area.
- ii) Initial investment is lower as compared to larger plants.
- iii) Requires less maintenance and gives higher yield per invested US Dollar.
- iv) Quicker realization of the returns of capital invested because of lower gestation period.
- v) Less work force requirements as compared to larger plants, thus better management and organizational concepts.

A comprehensive description outlining the production of cement, the process, the technology adopted, the raw materials required and the manufacturing method is in the attached document prepared by Movers (India) Ltd.

1.4 The Project Promoters

1.4.1 Makonde Cement Limited has been incorporated for the purpose of implementing this project and will have the following shareholding structure:-

- ✓ 90% - Makonde Group International - Singapore
- ✓ 10% - NTA Investments – Mauritius
- ✓ 10% - M Sinani - Mtwara

1.5 Project Costing

1.5.1 Preliminary cost estimates have put the total project cost at US\$10.32 million made up as below:

<u>Project Item</u>	<u>Equity</u>	<u>Loan</u>	<u>Total</u>
1. Fixed Investments (Plant, Civil works, (Infrastructure etc)	9,827,910	17,608,740	27,436,650
2. Pre-Operating Expenses	3,071,846	-	3,071,846
3. Working Capital	480,295	1,048,297	1,528,592
TOTAL PROJECT COST	13,380,051	18,657,037	32,037,088
Debt to Equity Ratio	41.76%	58.24%	100%

1.6 The Economic Benefits

1.6.1 The project has huge economic benefits for the region as well as Tanzania, as it offers the following:

- i) Through the introduction of a more cost effective cement, development as defined under Tanzanian Government Growth plan as well as projects identified under the DBSA Mtwara Corridor SDI Programme will accelerate.
- ii) Substantial savings in foreign exchange through reduced importation of cement as well as clinker into this region.
- iii) By setting up the project in the Mtwara region, the project is in line with the Government policy of encouraging decentralised investment.
- iv) Through the setting up of such a cement plant, the Government objective of poverty reduction through the creation of employment for an estimated 185 employees as well as effectively creating downstream employment for a further 150 persons, will be advanced.
- v) Through profit potential and employment opportunities, the Government will receive taxes from the project and downstream contractors, which will have the effect of positively contributing to the Government's drive for incremental tax revenues.
- vi) Transfer of latest know-how and technology to Tanzania

- vii) Development of specialized skills and development of the industry will accelerate employment opportunities in the region.

1.7 Environmental Impact Assessment

1.7.1 Generally, the potential environmental impact the cement production technology introduces is the dust emissions.

However, in the design of the VSK (Vertical Stack Kiln) Cement Plants, emission levels are generally lower due to adequate practices, such as use of high efficiency dust collectors than conventional horizontal kiln designs. Efficient Pollution Control equipments comprising of Reverse Jet or Pulse Jet Bag Filters in each section of the Cement Plants will be installed, which tend to maintain a very low dust emission level and thus have a good control over the environment.

Dr Gregory Njau of EATA in Dar es Salaam has conducted an EIA in accordance with the NEMCE regulations and shortly the approval is expected.

2.0 THE BACKGROUND AND PURPOSE OF STUDY

2.1 This study has been carried out for Makonde Cement Limited who requested a detailed feasibility study to assess the financial viability on the setting up of a cement plant at Mtwara in Tanzania.

2.2 Careful consideration was given to obtain a plant that was small, technically state-of-the-art, requires lower initial investment, can be set up in an underdeveloped rural area, requires less maintenance but higher yield and can provide quicker realization of the returns on capital invested. Most if not all the cement plants in Tanzania and the region have the large cement plants that are very expensive, which for this project it was considered would not be viable. Movers (India) Ltd (a company in India) was the vendor identified who is presently actively involved in the design, manufacture and construction of small cement plants that are technically competitive and suitable for this project in Tanzania.

2.3 The President of Movers (India) Ltd has held detailed discussions with the consultants and investors on the possibility of building a plant at Mtwara in Tanzania. It was from these discussions and subsequent market analysis that defined the feasible plant size that would make the venture a worthwhile socio-economic undertaking. Consequently, Movers (India) Ltd. offered a quotation for a 400 tonnes per day (130,000mt/year) Cement Plant.

2.3 The purpose of this study is to facilitate an appraisal by financial institutions and Makonde Cement Ltd investors and this document details all technical, marketing and financial aspects of a proposed Cement Plant, which is to be located at Mtwara.

Study Approach and Methodology

This report was produced after a combination of stakeholder interviews, review of reports and documentation by consulting engineers was completed. A market analysis has made a definition of the feasible plant size that could make the venture a worthwhile socio-economic undertaking.

3.0 THE PROJECT PROMOTER

3.1 Makonde Cement Limited has been incorporated in Tanzania, to implement this project and will have the following shareholding structure:-

- ✓ 90% - Makonde Group International - Singapore
- ✓ 10% - NTA Investments – Mauritius
- ✓ 10% - M Sinani – Tanzania

3.2 The proposed share capital of the company is US\$ 13, 380,051.77 million, which is the promoter's 41.76% contribution in the project and is backed by assets of the deposit as well as costs of the BFS valued conservatively at US\$5,104,205.

3.3 The necessary Mining PL Permit No, 5450/2008 is current and is in the name of Makonde Cement Ltd, The process to transfer the PL licence to a Mining License is underway and awaiting final Ministerial approval.

4.0 TANZANIA CEMENT INDUSTRY

4.1.1 Cement consumption in Tanzania has been on the increase over the years and established in the last three years, that the Tanzania consumption is between 1,500,000-1,620,000 tonnes of cement annually. This demand is expected continue to increase in the coming years especially with the increased focus by Government on infrastructure as well as private sector investment in the mining and other industries. With the present shortages of cement, this project will certainly help with expected development in the southern regions of Tanzania. In addition, with the latest prices of cement in the southern region being over US\$ 20.00 per 50kg bag this cement project will go a long way to reducing and controlling these high prices through cost effective processes and sensible marketing.

4.1.2 All three cement manufacturers of cement in Tanzania Twiga, Tanga and Mbeya Cement Companies have their factories in the central and northern parts of Tanzania and there is no cement factory presently in the southern region to offer a cost effective product in this region. The present situation is that a lot of the cement imported into Lindi & Mtwara regions also comes from Mozambique as well as the Tanzanian operations. The high transport costs to get products to the southern region make cement costs some of the highest in Tanzania.

4.1.3 In addition, the proposed cement factory in Ndumbwe will also be in a position to meet market needs of the Mozambican neighbour in the northern parts of their region, which also suffers from high cement prices.

4.1.4 Other marketing organizations with the support of the Tanzania Government until recently imported cement from Zambia, Mozambique and South Africa to meet the annual short fall in supply. With the demand in the world for the raw materials available in Africa as well as lack of additional capacity has meant that these African countries have also had to suspend their exports to Tanzania to meet their own increased demands.

4.1.5 Considering the above current situation, the cost to country in terms of foreign exchange is enormous and is in the region of the following:
Cement: around 250,000 tonnes at a conservative cost of US\$ 160/tonne - this represents a **Total costs per year of US\$ 40.0 million.**

4.2 Makonde Cement Ltd proposes setting up a 400 tonnes per day (130,000mt/year) Cement factory and the planned production will be as follows:

<u>Financial Year.</u>	<u>Tonnage.</u>	<u>No. of Bags.</u>	<u>Capacity Utilization</u>
Year 1	116,800	2,336,000	80.0%
Year 2 onwards	131,400	2,62,8000	90.0%

The above will represent savings in Foreign Exchange of approximately US\$ 20 million/year!

4.3 When Makonde Cement commences production, Tanzania's total cement production will increase to around by 1,300,000 tonnes per annum, and this will still leave a short fall in supply which will be covered initially by imports and later through the expansion of the various factories in Dar and in Tanga and Mbeya.

5.0 LOCATION OF FACTORY

5.1 The Mining License will replace the present PL No 5450/2008 as soon as the EIA is complete, and covers an area of some 52 square kilometres and is just 31 kilometres from Mtwara Port where export and outside sales will be undertaken.

5.2 The site, in the Ndumbwe village location was selected due to its position next to the source of raw material, limestone, where there are large deposits estimated at between **40-60.0 million tonnes** of lime according to initial survey studies. SRK Geological consultants who are undertaking the geological resource report undertook these, and this resource will enable the cement factory whose requirements are only **4.5 million tonnes** to run for over 30 years. Once the drilling programme is complete it is believed that additional lime deposit will enable this company to look at expansion in later years to more than double present production.

5.3 The factory site being near to the source of raw material, limestone, is also about midway between Kilwa in the Lindi Region to the north and Pemba in Northern Mozambique in the south (250 kms and 310 kms respectively). It will also enable cement sales to be sold as far as Songea in the Iringa region to the west, and these areas will more than adequately and competitively cover the proposed cement consumption in this whole area..

5.4 A standard 'Movers Ltd. India', 1400 M² factory shell (including 350 M² office space) will be built on a 3Ha plot, which is to be situated approximately 1000 metres from the limestone deposit where the raw material will be mined. Employment of all unskilled labour will be from within the district area.

6.0 THE PRODUCTION OF CEMENT

6.1 A brief description outlining the production of cement, the process, the technology adopted, the raw materials required and the manufacturing method is given below. A more comprehensive write up on these aspects using the VSK Cement Plant technology prepared by Movers (India) Ltd is given below:

6.2 Definition of a Cement Plant

6.2.1 Any Cement Plant installed to produce up to 100,000 tonnes per annum (or 300 tonnes / day) comes into the category of "Small Cement Plant". The quality of cement produced in Small Cement Plants is comparable to that produced by large cement plants and are in line with the International Standards. Such cement plants have a distinctive edge over large cement plants in a number of ways, such as lower initial investment; can be set up in rural or undeveloped areas; less maintenance and higher yields; less manpower requirements and quicker realization the of the returns on capital invested because of lower gestation period.

6.3 The Technology

6.3.1 Broadly speaking cement plants are set up through the adoption of two technologies: either Rotary Kilns- a rotating, horizontal tube; or Vertical Shaft Kiln (VSK) a stationary, vertical, tubular kiln. With other further classifications, it has been observed that Cement Plants with VSK technology are easier to operate and more advantageous than Rotary kiln based Cement Plants.

6.3.2 Makonde Cement Ltd proposes to set up a 400 tonnes per day or 130,000 mt/year, Cement Plant using the VSK technology and producing "Portland Standard High Quality 32.5N and 42.5N type, with an additional lower cost 22X plaster cement as and when the demand dictates.

6.4 The Process

6.4.1 The distinct types of processes adopted in Cement Plants are:

- Wet process: Kiln feed is in a slurry form.
- Semi Wet Process: The slurry is dried into cake and then fed into kiln.
- Dry Process: Kiln feed is in the form of powder.
- **Semi Dry Process: The dry powder is converted into nodules by spraying water and these nodules are then fed into the kiln.

****VSK based Cement Plants is a semi-dry process.**

6.5 Raw materials

6.5.1 The major raw materials required for producing Ordinary Portland Cement (OPC) are: Limestone; Clay; Low volatile coal/ Coke/ Petroleum coke/ Coke Breeze; Gypsum; Additives (Iron Ore, Laterite or Bauxite for correcting the raw mix)

6.6 Manufacturing Method

6.6.1 VSK based Cement Plants essentially comprises of the following sections:

- Crushing Section
- Raw Mill Section
- Blending and Storage section
- Vertical shaft Kiln Section
- Cement Mill Section
- Cement Storage and Packaging Section.

6.7 Power

6.7.1 It is recommended that for a 200 tonnes per day plant, raw mill and cement mill motors are rated for 6,600 Volts, 3 phase, 50 Hz Power supply. Power supply for other motors is rated for 440 Volts. Plant light fittings are rated for 220 Volts. Furthermore, high tension lines (33KV or 22KV) should be directly drawn to the plant from the substation of the Electricity Corporation to avoid the voltage fluctuations. The factory should have a sub-station with suitable transformer and control panels. To produce a ton of cement, 100<115 kWhr (units) of power is required.

6.8 Dust Pollution

6.8.1 The dust emissions are generally low in Cement Plants due to adequate practices, such as use of high efficiency dust collectors and good house keeping etc. Efficient Pollution Control equipments comprising of Reverse Jet or Pulse Jet Bag Filters in each section of the Cement Plants are recommended to maintain a very low dust emission level and to have a good control over the environmental aspects.

6.9 Water Supply

6.9.1 Water is an essential commodity in a Cement Plant. A Ground Water tank and an Overhead tank on the VSK building with suitable pumping arrangement with piping to mill buildings and VSK building are provided for as well as the company sinking its own borehole to ensure adequate supply is always available.

7.0 ENVIRONMENTAL IMPACT ASSESSMENT

7.1 Generally, the potential environmental impact the cement production technology introduces is the dust emissions. However, in Cement Plants emission levels are generally low due to adequate practices, such as use of high efficiency dust collectors. Efficient Pollution Control equipments comprising of Reverse Jet or Pulse Jet Bag Filters in each section of the Cement Plants are installed, which tend to maintain a very low dust emission level and thus have a good control over the environment.

7.2 In the Vertical Shaft Kiln Section of the Cement Plant, smoke emission from the kiln chimney (which is kept about 30 m high from the ground level), negligible quantities of Carbon monoxide, Carbon dioxide and dust along with sizeable quantity of steam are left out into the atmosphere. In normal course, since the plant is located away from dense population, no pollution control equipment need be installed. However, in the VSK Cement Plant, a Wet Scrubber is normally provided in order to reduce these emissions.

7.3 **A Tanzanian company, ENATA**, owned by Dr. G. Njau a highly respected environmentalist, has completed the EIA and is awaiting final approval from NEMCE. This should be completed by mid October 2008 in time for the completion of the study and Mining License application and allow for the ordering of the plant and equipment to meet the proposed deadline of commissioning of the plant by December 2009.

8.0 COMPETITION

- 8.1 The competition for Makonde Cement is expected to continue to come from:
- Twiga Cement – Its factory is in Dar es Salaam some 600 kms away from the market in the southern region but with this company having difficulty in meeting its local demands as well as shipping costs being high the landed cost to compete with MtCL will be difficult
 - Tanga Cement – Its factory is located in Tanga over 800 kms away in the north, and again with shipping costs and their local markets to satisfy they will also find it difficult to compete with MtCL
 - Mbeya Cement - Its factory situated in Mbeya Region where routes to Mtwara

and Lindi would have to be through Dar es Salaam and therefore will make it extremely difficult for them to compete for this market.

- Imported cement is mainly from overseas and the Far & Middle Eastern countries as well as India, with the minimum quantities of some 25,000 tonnes per shipment by these sellers. Unless there are large confirmed orders and markets as well as cash flows by the buyers to meet these criteria, which have proved difficult in Dar es Salaam and other markets, competing in, Mtwara will be difficult. In addition, with the high prices presently in Dar es Salaam and elsewhere of around US\$ 10.00 / 50 kg bag it seems difficult to see how prices will effect Mtwara when most prices increases are a direct result of prevailing high world market prices.

8.2 Makonde Cement Ltd ability to compete effectively with its primary competitors is through the pricing of its cement products against production costs. Makonde Cement Ltd hopes to sell its cement ex factory for between US\$160.00/mt (US\$8.00/50kg bag) and US\$ 200.00/50kg bag depending on price escalations between now and time of opening of the cement plant, expected in December 2009. NOTE: Current market price for cement in the country averages between US\$200 to 400/mt (US\$10.00 to 20.00 / 50 kg bag).

8.3 In the wake of positive macro-economic reforms, as well as the findings of the Mtwara Corridor SDI Programme, the Tanzania & Mozambique economies should experience significant growth in the next two to four years. This will have a direct positive impact on the demand side of cement and that Makonde Cement Ltd should be able to capture a significant proportion of this growth, in addition to gaining a market share directly from its competitors.

9.0 ECONOMIC BENEFITS

9.1 The project has huge economic benefits for the country and the region, as it offers the following:

- Through the introduction of a more cost effective cement, development as defined under Tanzanian Government Growth plan as well as projects identified under the DBSA Mtwara Corridor SDI Programme will accelerate.
- Substantial savings in foreign exchange through reduced importation of cement as well as clinker into this region.
- By setting up the project in the Mtwara region, the project is in line with the Government policy of encouraging decentralised investment.
- Through the setting up of such a cement plant, the Government objective of poverty reduction through the creation of employment for an estimated 185 employees as well as effectively creating downstream employment for a further 150 persons, will be advanced.
- Through profit potential and employment opportunities, the Government will receive taxes from the project and downstream contractors, which will have the effect of positively contributing to the Government's drive for incremental

tax revenues.

- Transfer of latest know-how and technology to Tanzania
- Development of specialized skills and development of the industry will accelerate employment opportunities in the region.

10.0 PROJECT COSTING

10.1 Preliminary cost estimates have put the total project cost at US\$27.714 million as detailed below:

<u>Project Item</u>	<u>Equity</u>	<u>Loan</u>	<u>Total</u>
Fixed Investments			
Movers complete cement Plant CIF	2,295,810	13,009,590	15,305,400
Civil Works	1,837,350	4,287,150	6,124,500
Housing & Infrastructure	270,000	180,000	450,000
Shareholders contribution pares, Lab Equip & Weighbridge – Incl.	00	00	00
Vehicle & Office Equip	33,000	132,000	165,000
Local Installation Costs	1,416,750	0.0	1,416,750
Sub Total	5,852,910	17,608,740	23,416,650
Pre-Operating Expenses			
Site Preparation	388,000	0	388,000
Licenses & Registration	15,000	0	15,000
Training	75,000	0	75,000
Shareholders Contribution- deposit	3,975,000	0	3,975,000
Trial Production	100,000	0	100,000
Interest during Construction	1,942,641	0	1,942,641
Design & Supervision	551,205	0	276,675
Sub-Total	7,046,846	0	7,046,846
	9,564,316	16,366,800	30,463,496

Total Fixed Investments
Makonde Cement Ltd - 400 t/d Plant

Mant Consultants

Working Capital			
Salaries and Overheads	31,025	191,206	273,152
Accounts Receivables	270,763	631,781	902,545
Inventories	31,250	0.0	31,250
Work in Progress	27,076	63,178	90,254
Finished Goods	90,254	210,71,636	530,909
Receivables	247,500	577,500	825,000
Sub-Total	480,295	1,048,297	1,528,592
TOTAL PROJECT COST	13,380,051	18,657,037	32,037,088
DEBT EQUITY RATIO (%)	41.76%	58.24%	100%

11.0 FINANCIAL ANALYSIS AND APPRAISAL

Financial Analysis

11.1 Detailed financial projections are available. These show that the project is financially viable with a 5 year Internal Rate of Return (IRR) of 49% (Lundin Sweden analysis) – see table below

A Net Present Value (NPV) (Discounted at 12%) of US\$12,521,847.

Furthermore, the financial projections demonstrate that the project will be able to service its financial obligations on a timely basis of 5 years – 1-year moratorium plus 4 years repayments - and at the same time be able to meet all its other operational obligations.

NOTE: Banks offering finance have offered an 18 to 24 month moratorium and 7 years repayment terms which will enable the cash flow of the company to become stronger.

MAKONDE CEMENT Ltd

Lundin Analysis of cement plant - Nov 08

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 5 6 X CF
Cash outflow	13,867,475						
Cash inflow	183,527	10,745,058	7,953,232	8,801,391	9,698,035	10,660,972	57,569,248
<i>Assuming 100% dividend at 10% WHT</i>	13,683,948	10,745,058	7,953,232	8,801,391	9,698,035	10,660,972	57,569,248
Period	0	1	2	3	4	5	5
Discount rate	20%	20%	20%	20%	20%	20%	20%
Discount factor	1.0	1.2	1.4	1.7	2.1	2.5	2.5
PV	13,683,948	8,954,215	5,523,078	5,093,397	4,676,907	4,284,406	23,135,790
NPV	37,983,845						
IRR - 5 year	49%						
IRR - 3 year	23%						

Inflation	Sep	Oct
Tanzania	11.60%	11.80%

11.2 In practice, revenues, costs, profits, and cash generated should all increase under inflation while interest payment and debt repayments are fixed in money terms. Hence, the impact of inflation is to improve the debt service coverage ratio and ease the burden of loan finance. Other main assumptions include:

11.3 Notes and assumptions used in these financial projections are available to this study. These notes and assumptions have been supplied and/or confirmed with technically competent consultants and /or proposed technical partners to this project, those that refer to general practices are deemed reasonable. Other main assumptions include:

- a) All revenues, costs and prices have been denominated in United States Dollars
- b) The proposed selling price of cement will be US\$160.00/mt (US\$8.00 per bag) with present selling prices in the region in excess of US\$ 20/50kg bag.
- c) Project costs (Plant and Machinery, building materials, motor vehicles are all assumed imported duty free while raw materials (limestone, coal, gypsum, and chemicals) are VAT exempted.
- d) The total project cost will be US\$ 32, 037 million and financing is calculated at a debt/equity ratio of **58.24 : 41.76**.

11.4 A summary of the financial projections for the first five years the project will be in operation is highlighted below – BASED on a selling price of **US\$ 8,00 /50kg bag**:

Income Statement

(US\$'000)	Year 1	Year 2	Year 3	Year 4	Year 5
Turnover	19,584,000	22,579,300	24,295,860	26,118,049	28,076,903
Profit Before Tax	6,214,217	8,723,261	10,224,933	11,829,284	13,568,288
Profit After Tax – (30%) IF TAXES ARE APPLICABLE	4,349,951	6,106,283	7,157,453	8,280,498	9,497,801

Cash Flow Statement

Net Cash – '000 (BEFORE REPAYMENTS)	10,271	19,239	24,830	29,539	34,783
Cumulative Cash –'000 (After Repayments & Dividends)	8,405	13,353	17,417	21,898	26,827

Balance Sheet**Equity – '000**

Share capital	13,380	13,380	13,380	13,380	13,380
Current Year's Earnings	4,349	4,579	5,368	6,210	7,123
Retained Earnings	0	4,349	8,929	14,297	20,508
Total Equity	17,730	22,309	27,677	33,888	41,011

Liabilities – '000

Current Liabilities	816	2,466	2,801	3,158	3,543
Long Term Loan	18,657	14,636	10,214	5,350	0

Total Equity & Liabilities	37,203	39,414	40,694	42,397	44,555
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Assets – '000

Fixed Assets	27,436	27,436	27,436	27,436	27,436
Current Assets	9,576	14,668	18,830	23,415	28,455
Intangible Assets	3,071	3,071	3,071	3,071	3,071
Total Assets – '000	37,203	39,414	40,698	42,397	44,555

12.0 RISK AND SENSITIVITY ANALYSIS

12.1 The main risks facing the project are:

- a) A decline in sales in the region due to the poor supply as well as the high selling price of cement that may reduce in the future as a result of fierce competition from the other local producers and/or imported cement. A situation that presently is hard to imagine due to the present selling prices in Dar es Salaam and elsewhere being over 46% higher than the projected selling prices of US\$ 10.00 / 50 kg bag that this project has been based on.
- b) A decline in production and sales due non-availability of raw material -- limestone. This is highly unlikely as the inferred deposit is in excess of 30 million tons and our 20-year requirement is less than 5 million tons.
- c) If direct costs and operating expenses rise significantly due to inflation.

12.2 A risk and sensitivity analysis done on the calculated Internal Rate of Return based on the factors outlined above yielded the following results:-

12.3 MAKONDE CEMENT LIMITED IRR, NPV and Z-Score

IRR 49% (assumes CV of 5x Year 5 Cash-flows)

NPV (@15%) 32,905,460

Z-Score 4.76

X1 = Working Capital 1,528,592	= 0.05 Total Assets	3 2,037,089
X2 = Retained Income 4,349,952	= 0.14 Total Assets	3 2,037,089
X3 = PBIT 8,079,921	= 0.25 Total Assets	3 2,037,089
X4 = Net Worth 3 2,037,089	= 3.72 Total Liabilities	8,622,445
X5 = Sales 1 9,584,000	= 0.61 Total Assets	3 2,037,089
TOTAL	= 4.76	

NOTE - Decision:

If Z greater than 2,90 then client is safe

If Z less than 1.23 then client is bankrupt

Scenario

Base Case

Internal Rate of Return

49%

20% decline in price of cement

23.55%

20% decline in supply of raw materials

24.31%

20% increase in direct and operating costs

25.71%

The project is more sensitive to a decline in the selling price of cement.

13.0 MANAGEMENT

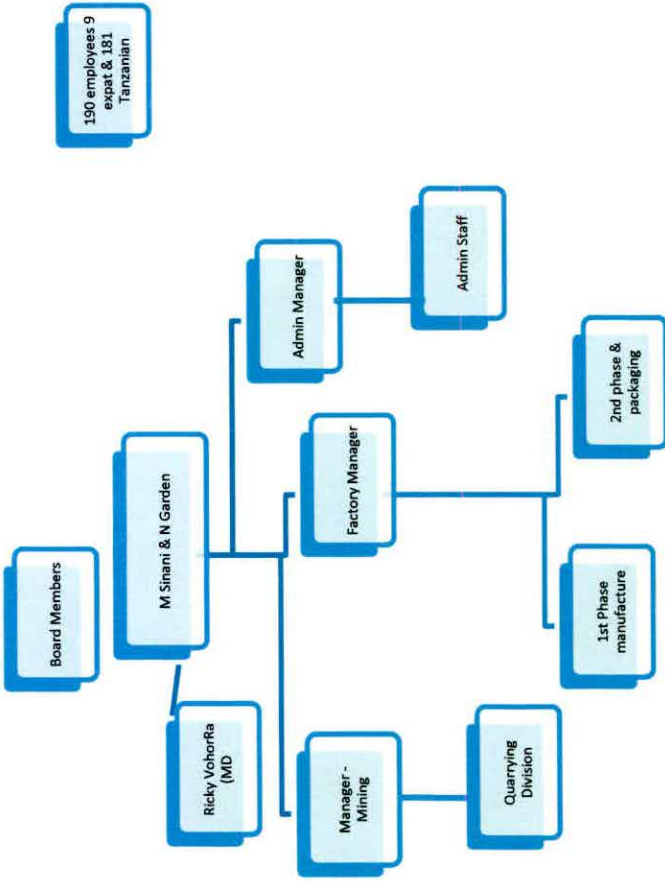
13.1 For the Cement Plant size proposed, it is recommended that the minimum man-power requirement be as follows:

<u>Designation</u>	<u>Number</u>
Officers	13
Skilled & semi Skilled Labour	92
Unskilled & Casual Labour	35

Makonde Cement Ltd however proposes to employ a total of 189 whose positions are shown below.

<u>Designation</u>	<u>Number</u>	<u>Designation</u>	<u>Number</u>
General Manager	1	Electricians	4
Factory Manager	1	Secretaries	2
Finance Manager	1	Receptionist	1
Chief Chemist	1	Laboratory Assistants	4
Administration Officer	1	Fitters/Welders	3
Supervisors	4	Plant Operators	8
Engineer	1	Tractor Drivers	6
Foremen	4	Stores Clerks & Checkers	10
Finance Officers	3	Labourers	133

Makindde Cement Ltd
ORGANAGRAM





TANZANIA INVESTMENT CENTRE

REGISTRATION FORM

FOR

CERTIFICATE OF INCENTIVES

**(Tanzania Investment Act 1997, Section 17 and 18,
and the Investment Regulations:
Regulation 42, Government Notice No. 318A of 2002)**

Tanzania Investment Centre
9A & B Shaaban Robert Street
P. O. Box 938
DAR ES SALAAM
Tel. 022 2116328
Fax. 022 2118253
e-mail: information@tic.co.tz
Website: www.tic.co.tz

(Please fill the form in duplicate)

UNITED REPUBLIC OF TANZANIA

THE TANZANIA INVESTMENT ACT

(No. 26 of 1997)

APPLICATION FOR REGISTRATION

(Made under Regulation 42)

To: The Executive Director
Tanzania Investment Centre
P. O. Box 938
DAR ES SALAAM
Tanzania

1. I/We NEIL CHARLES GARDEN

(director/directors/agent of MAKONDE CEMENT LTD

(name of business enterprise) apply for registration of

under Section 17 of the Act and Part IV of the Investment Regulations, 2002.

2. The registered office of the company will be situated at MTWARA - BOM

32/33 CASHEN ROAD BUILDING, TANU ROAD, MTWARA

Copies of the following documents are attached to this application:

- (i) The Memorandum and Articles of Association/or partnership agreement
- (ii) Certificate of Incorporation/Registration
- (iii) A copy of the Project Profile or Feasibility Study showing the implementation period, programme of implementation and operative date
- (iv) Evidence of financing and evidence of land ownership for the project

3. The Head Office of the Company will be situated at Room 32/33 CASHEN ROAD BUILDING TANU ROAD MTWARA

4. The Principal Officers of the Company are MOHAMED SIKANI CHAIRMAN
NEIL GARDEN CONSULTANT/DIRECTOR,

5. Auditors of the Company are PKF TANZANIA P.O. BOX 12729
DAR ES SALAAM

6. The authorized share capital of the Company is Tshs./US\$ US\$ 10 MILLION

7. The intended capital investment of the Company in terms of Section 2(2) of the Act is Tshs./US\$ US\$ 32,037,089
8. The month and day of the financial year end is 31st December

Note: **failure to provide all the required information will result in the return of the application by the Centre.**

I/We enclose a cheque/cash made payable to the **Tanzania Investment Centre** for Tshs./US\$

\$100 paid Being the Registration Fees. **In the event this application is unsuccessful we understand that this fee will not be refunded.**

I, NEIL CHARLES GARDEN of Post Office Number 767 Mtwara

do solemnly and sincerely declare that I am a director/duly

authorized agent of MAKONDE CEMENT LTD.

AND that all the requirements of the Tanzania Investment Act, 1997 in respect of matters precedent to the registration of the business enterprise under the Act and incidental thereto have been complied with, **AND** I make this solemn declaration conscientiously believing the same to be true.

Declared at Dar es Salaam }

The 02 day of December 2003 }
2003

Neil Garden
Applicant

Before me:

[Signature]

Commissioner for Oaths



APPLICATION SUMMARY

Company Name: MAKONDE CEMENT LTD

Certificate of Incorporation Number: 63428 Status: NEW

Certificate of Incorporation Date: 12 DECEMBER 2007

Post Box: 767

Town: MTWARA

Sector: (SOUTHERN REGION) MANUFACTURING Sub-Sector: (MTWARA) CEMENT MANUFACTURE

Investment Financing Plan in Million US\$/Tshs.

Foreign Equity	Local Equity	Foreign Loan	Local Loan
<u>\$12,042,046</u>	<u>\$1,338,005</u>	<u>NIL</u>	<u>\$18,657,037 (\$32,427,488)</u>
			<small>(TZ 24,254 Billion) (TOTAL)</small>

Project Objectives: To SET up & build & Commission
A complete VSK CEMENT PLANT AT NDUMBWE
VILLAGE, MTWARA

Capacity: 120,000 TONES/YEAR

Employment: Foreign: 6 Local: 189 Total: 195

Implementation Period: 15-18 months

Project Location

Site/Plot/Block No.: NDUMBWE VILLAGE MTWARA
30KMS FROM MTWARA - MAIN MTWARA/LINDI ROAD
 Street: District: Region:
 (Attach sketch map showing project location) SEE ATTACHED LOCATIONS

Shareholders	Nationality	%	
<u>ARANIA CORPORATION</u>	<u>PANAMANIAN</u>	<u>90%</u>	<u>NOTE ABOVE IS</u> <u>BEING CHANGED</u> <u>to READ</u> <u>SAME AS BFS</u> <u>STATEMENT</u> 12. ① MAKONDE GROUP SINGAPORE 90% ② M. SIKANI TANZANIA 10% ③ NAT INVESTMENTS MAURITIUS 10%
<u>M. SIKANI</u>	<u>TANZANIAN</u>	<u>10%</u>	
.....	
.....	
.....	
.....	

Investment Breakdown US\$/Tshs.M

Land/Building	6,574,500
Plant	15,305,400
Vehicles	165,000
Furniture & Fittings	200,000
Pre-expenses	7,046,846
Others <i>Local assy</i>	1,216,750
Working Capital	1,528,592
TOTAL	<u>\$32,037,088</u>

Contact Details:

Name: *NEIL GARDEN* Title: *Consultant / Director*
Telephone: *+255 783 669 644* Fax: *+255 222 666 617*
+255 22 2 667 148
Email: *NEIL@MAKONDEGROUP.TZ.com*

Payments to be made payable to:

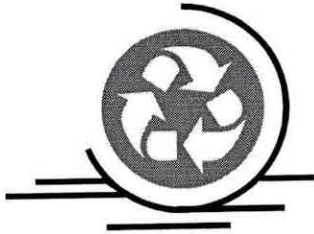
TANZANIA INVESTMENT CENTRE
STANDARD CHARTERED BANK TANZANIA LTD.
SWIFT ADDRESS: **SCBLTZTX**
ACCOUNT NO.: **8702006002000**

SKETCH MAP SHOWING PROJECT LOCATION

See attached documents.







*Promoting Environmental,
Social & Economic
Sustainable Development*

MAKONDE CEMENT LIMITED

**P. O. Box 23418
Dar es Salaam
TANZANIA**

**Phone: +255 22 266 6617
Fax: +255 22 266 7148
Mobile: +255 783 669 644**

BOARD RESOLUTION

Present:
M Sinanai – Chairman
N Garden - Director

At a Board Meeting held at Bish Building, Kinondoni Road on 06th December 2008 at 10.00 am, the following was resolved and approved:

- That the company is hereby authorised to submit application to Tanzanian Investment Centre – TIC – for consideration and approval of the project and for approval of **Certificate of Incentives** for our Makonde Cement Project due to commence early in 2009.
- It is noted that Makonde Cement Ltd TIC application registration form No is 07402, with serial number 5292 was paid for in the amount of US\$ 100.00 (One hundred US Dollars) at the time of collection of the blank form.
- That Neil Garden is hereby authorised by the board to sign the said application and submit it on behalf of Makonde Cement Ltd.

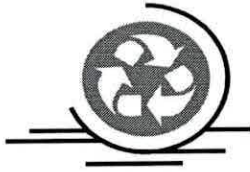
There being no further business the meeting closed at 10.10

Signed

M. Sinani
Chairman

Signed

N Garden
Director



MTWARA CEMENT LIMITED

*Promoting Environmental,
Social & Economic
Sustainable Development*

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Promoting Environmental,
Social & Economic
Sustainable Development

MAKONDE CEMENT LIMITED

P. O. Box 23418
Dar es Salaam
TANZANIA

Phone: +255 22 266 6617
Fax: +255 22 266 7148
Mobile: +255 76 294 2346

STRICTLY PRIVATE & CONFIDENTIAL

27th November 2008.

The Executive Director
Tanzania Investment Centre
P.O. Box 938
Dar es Salaam

Dear Sir

Re: Application for TIC Registration for Certificate of Incentives – Reference 07402

We refer to the above and wish to register our proposed Cement Plant project to be built in Ndumbwe Area of Mtwara, valued at US\$ 32,427,488.92 (or Tanzanian Shilling approximate value of Tz Sh 42,155,735,596/-) for TIC Certificate of Incentives.

In addition we request approval and permission to import plant & equipment 'Duty & Surtax & VAT Free to the total value of US\$ 19,979,194.00 (or Tanzanian Shilling approximate value of Tz Sh 25,972,952,200/-) to enable us to complete this project as planned – all as per attached supporting documentation.

Our project is the construction & commissioning of a '400 t/day mini' cement plant in the southern region in Mtwara, which was identified in the recent study conducted under the Development Bank of Southern Africa Mtwara Corridor SDI Programme. Our BFS (Bankable Feasibility Study) recently completed has proven that this project is an excellent project giving excellent returns on investment to the investors.

This project will assist in the acceleration of development to take place in the Mtwara, Lindi, Ruvuma and other regions in Southern Tanzania through the manufacture and supply in Mtwara of reliable & constant high quality cost effective cement.

This project employ 189 Tanzanians, and will also indirectly employ between 150 to 200 other individuals and companies in upstream and downstream operations through mining of gypsum for our plant, transportation of raw and finished materials, distribution and sales of the final products.

The effect of annual wages in excess of Tz Sh 1 billion/ year and another Tz Sh 3.055 billion/year for subcontract and other work in the region will also have a tremendous impact on rural and regional development in this region

Through the production of high quality cement at a more effective price than is presently being charged, other direct investment will take place in the region. This part of Tanzania has so much potential in gas and oil as well as mining and other industries that will open up in this part of Tanzania some of which have also been identified under the Mtwara Corridor SDI Programme and other general development agencies studies and our project will be there to assist in all these developments.

To assist in the approval of our TIC Certificate of Incentives we have pleasure in enclosing the following in support of our application:

- TIC Form PA 1, Serial No. 5292 TIC No. 07402.
- Copy of BFS (Bankable Feasibility Study) done by Mant Consultants
- Copy of IM (Information Memo) sent out in September 2008, by Serengeti Advisers – our appointed transaction adviser - to all potential investors as well as banks seeking their interest in our project.


Included in this IM is the following information:

- Financial projections
- Mineral Rights Notification letter from Ministry of Energy & Minerals
- Resource Assessment by SRK –EA Consulting – a geologist consulting group based in Tanzania.
- VSK Plant layout
- VSK Cement VSK Plan description
- Small versus large cement plants – rationale
- Letter from Artumas confirming continuous power supply to plant.
- EIA Letter from ENATA
- Project Manager Letter from BISH Dar es Salaam
- A copy of letter from NBC Bank offering to cover all debt finance for the project amounting to US\$ 18,657,037.00.
 - We have had offers from other banks to assist with the financing of our project and have yet to decide which finance bank to utilise for our project.
- Update on outstanding issues to complete BFS
- Copy of Letter to Director of Surveys
- Copy of Makonde cement Ltd - Certificate of Incorporation
- Copy of Makonde Cement Ltd – Memorandum & Articles of Association.
- List of Plant & Equipment required for the project amounting to US\$ 19,979,194.00 or (or Tanzanian Shilling approximate value of Tz Sh 25,972,952,200/-)
 - Main Factory and Process & Packaging Plant - See attached schedule of plant & Equipment from Movers India – List 1.
 - Quarry & Other Equipment - See separate list of additional equipment required for this contract – List 2.
 - Office and Laboratory Equipment – List 3.
 - Miscellaneous Items not covered above – List 4.

We believe our 'mini' cement project will bring much needed development and wealth to the Southern Region of Tanzania and will assist in adding to the prosperity of this part of Tanzania.

We look forward to receiving our approval of our application in due course. In the meantime, should you have any questions or queries regarding our application, please do not hesitate to make contact with the undersigned at any time

Yours faithfully



Neil Garden
Consultant/Director
Makonde Cement Ltd
Ph + 255 783 669 644

Enclosures attached.



TIC Evaluation Report

Name of the Company
Makonde Cement Ltd.

Post Box	Mtwara-Lindi Road\ Ndambwe Village	COI Number	63428	Contact	Mr. Neil Garden
Post Office	767	COI Date	12/12/2007	Designation	Consultant/Director
Region	Mtwara	Application F. No	07402	Phone	0
Country	Tanzania	Status	New	Direct Phone	0
		Sector	Manufacturing	Cell Phone	0783 669 644
		Sub Sector	Cement Manufacturers	Fax	022 2666 617/022 2667149
		File No	041615	E-Mail Address	Neil@Makondegrouptz.Com

Project Location		Investment Finance Plan in Millions USD											
Plot/Block	Ndambwe Village	<table border="1"> <thead> <tr> <th>Foreign Equity</th> <th>Local Equity</th> <th>Foreign Loan</th> <th>Local Loan</th> </tr> </thead> <tbody> <tr> <td>12.042</td> <td>1.338</td> <td>0</td> <td>18.657</td> </tr> </tbody> </table>	Foreign Equity	Local Equity	Foreign Loan	Local Loan	12.042	1.338	0	18.657			
Foreign Equity	Local Equity		Foreign Loan	Local Loan									
12.042	1.338		0	18.657									
Street	Mtwara-Lindi												
District	Mtwara Rural												
Region	Mtwara												

Shareholders Detail			Investment Breakdown (USD Million)	
Name	Nationality	(%)	Land/Building	6.574
Mohamed Said Sinani	Tanzanian	10	Plant	15.305
Azania Corporation Ltd.	Panamanian	90	Vehicles	0.165
			Furniture & Fittings	0.2
			Pre-expenses	7.047
			Others	1.217
			Working Capital	1.529
			Total	32.037

Employment	195	Evaluated By	Zakaria kingu
Capacity	120,000 tones p.a.	Drawn By	Dorah Registry
Project Turn Over			

Description

To set up, build and commission a complete VSK cement plant at Ndumbwe village , Mtwara.

Recommendations

Be approved subject to providing evidence as required by section 17 of Tanzania Investment Act, 1997

Decision

Approved - Neil Garden
16/12

TICC/PP.10/041615/2

19 December 2008

Managing Director,
Makonde Cement Ltd,
P.O. Box 23418,
DAR ES SALAAM

RE: CERTIFICATE OF INCENTIVES FOR INVESTMENT IN THE SETTING UP, BUILDING AND COMMISSIONING OF A COMPLETE VSK CEMENT PLANT AT NDUMBWE VILLAGE IN MTWARA

We wish to acknowledge receipt of your project proposal to set up, build and commission a cement plant as presented in the TIC P.A. 1 Form No. 07402 and Feasibility Study with a projected investment of USD 32.037 m.

We have studied your project proposal and are pleased to inform you that your investment proposal is now officially registered and therefore your project will be granted a CERTIFICATE OF INCENTIVES, given under authority conferred upon TIC under Part III, Section 17 (1-8) of the Tanzania Investment Act, 1997. In order to enable TIC prepare your Certificate of Incentives you will be required to submit the following:

- Bank Reference for equity funding or a letter from Bank/Financial Institution indicating that a loan is granted or is under consideration as required by Section 17 (3) (f) of Tanzania Investment Act, 1997.
- Certified document showing evidence of Land ownership for the location of the project.
- Status of current Company shareholding position from BRELA.

You will also be required to submit to the Centre a Progress Report on the implementation of the project after every six months for our information and review. Guidelines for the preparation of the report are contained in annexure 2 also attached to this letter. Please do not hesitate to contact the Centre for any clarification if the need arises. Please also note that a facilitation fee equivalent to US\$ 750.00 is payable at the ruling exchange rate before your Certificate of Incentives is prepared. Please arrange to make payments at your earliest convenience.

TICC/PP.10/041615/2

19 December 2008

We wish you every success in the implementation of the project.

Yours sincerely,
Tanzania Investment Centre



B. D. Chonjo

For: Executive Director

Copy to: Permanent Secretary,
Ministry of Finance and Economic Affairs,
P. O. Box 9111,
DAR ES SALAAM

Permanent Secretary,
Ministry of Industry, Trade and Marketing,
P.O. Box 9503,
DAR ES SALAAM

Commissioner General,
Tanzania Revenue Authority,
P. O. Box 11491,
DAR ES SALAAM



(Copy)
National Bank of Commerce Limited

Head of Corporate Banking

P. O. Box 1863, Dar es Salaam, Tanzania

Tel: +255 (0) 22 211 1970

Fax: +255 (0) 22 213 0596

Swift address: NLCBTZTX

e-mail: corpbanking@nbctz.com

www.nbctz.com

March 26, 2009

Bertram Eyakuze,
Director
Serengeti Advisers Limited
Dar es Salaam.

Dear Sir:

RE: EXPRESSION OF INTEREST TO TAKE PART IN FINANCING CONSTRUCTION AND INSTALLATION OF CEMENT PLANT IN MTWARA

Reference is made to the Information Memorandum relating to the proposed financing of Makonde Cement Ltd.

Having reviewed the information memorandum we are pleased to submit our indicative term sheet that will form the basis for future discussions on the proposal.

The following are pre-conditions for the Bank to proceed to the next level of discussions

- i. Availability of equity investors to bring the owner's equity to the proposed ratio.
- ii. Availability of all necessary permits from relevant authorities.

Please note that the attached are indicative terms and conditions that may be available to a facility of the nature indicated your information memorandum, and should not at this stage, be misconstrued to mean an offer or commitment on the part of National Bank of Commerce Limited nor any of its officers to provide these facilities.

Yours faithfully,
NBC LIMITED


Cassim Zacharia
Manager – Corporate Business Centre

National Bank of Commerce Limited Reg. No. 32700


DIRECTORS: F J DU TOIT** (Non-Executive), Dr M J ASSAD* (Non-Executive), A R MPUNGWE* (Non Executive), A.V DE LA RUE**** (Non- Executive) E B J LAURENTINO*** (Non-Executive) J.J GROBLER** (Non Executive), C P DE VRIES** (Managing/Executive), J P VERMAAS** (Executive), A.P VAN JAARSVELD** (Executive), SECRETARY: A R WOISO*

(* TANZANIAN, ** SOUTH AFRICAN, ***BRAZILIAN, ****BRITISH).

INDICATIVE TERM SHEET FOR A TERM LOAN FACILITY

- Borrower:** Makonde Cement Limited.
- Lender:** National Bank of Commerce Limited
- Facility:** Term Loan for a period of 7 years including a grace period of 18 months. Capital to be repaid in 66 equal monthly installments commencing 18 months after the first draw down.
- Purpose:** To part finance construction and installation of the proposed cement plant in Mtwara.
- Amount:** USD 18,657,037.00 equivalent in Tanzanian Shillings
- Draw downs:** Draw down and repayment of the term loan shall be as follow:
(a) Approved amount has to be drawn within 18 months from the first draw down date.
(b) Draw downs will be in multiple drawings; and any requests must be in writing from the borrower.
- Currency:** Tanzanian shillings: (unless it is proven that, the company will receive some of its sales proceeds in FOREX; part of the facility can be advanced in USD)
- Maximum Tenor:** 7 years, the tenor is to be calculated from the date of the first drawdown.
- Moratorium:** An 18 month moratorium will apply on principal repayments. This moratorium period will be counted from the date of the first drawdown.
- Repayments:** Principal repayments shall be repaid in 66 months after 18 months of grace period. During grace period only interest will be charged on the outstanding balance.
- Interest Rate:** The facilities shall bear the rate of interest of NBC TZS Base plus 1% i.e. 17% p.a that will be charged every month on the outstanding amount. The bank reserves the right to change this rate any time and the client will be notified on this change.
- Default Interest:** In the event that the repayments are in default, an additional charge of 5% per annum will be levied on the defaulted portion in addition to the agreed interest rate
- Arrangement Fee:** 1.5%
- Security:** To be agreed but may include:
1. Landed properties
2. Debenture Charge over the equipment being financed.
3. Guarantees

The term sheet described herein is intended for discussion purposes only and is neither a commitment nor an offer to commit to any transaction or financing by NBC. The issuance of any Offer or Commitment Letter will be subject to satisfactory due diligence of the Borrower and receipt of a favorable legal opinion from NBC's legal counsel. The following terms and conditions are subject to modifications at the discretion of NBC.



Other Conditions: To include but not limited to:

1. At least 80% of the company sales proceed to be routed through NBC.
2. All FX pertaining to the Loan proceeds to be done with NBC.
3. The borrower must insure through NBC Ltd Insurance Unit
4. Any other conditions to be agreed upon.

The term sheet described herein is intended for discussion purposes only and is neither a commitment nor an offer to commit to any transaction or financing by NBC. The issuance of any Offer or Commitment Letter will be subject to satisfactory due diligence of the Borrower and receipt of a favorable legal opinion from NBC's legal counsel. The following terms and conditions are subject to modifications at the discretion of NBC.

Handwritten signatures in black ink, appearing to be initials or names, located at the bottom left of the page.

HADI YA SERIKALI

QUER RECEIPT

NIME KWA
Received from

MAKONDE CEMENT LTD

KIASI

Shs.					Cts.
			19,500		

JUMLA YA SHILINGI (Kwa maneno)
The sum of Shillings (Words)

Nineteen thousand five hundred only

NA SENTI
And Cents

KWA MALIPO YA
In respect of

Filing fee form no 128 (2008)

KWA FEDHA TASLIMU/HUNDI

NAMBA By Cash/Cheque No.

Cash

Kituo - Station

Dsm

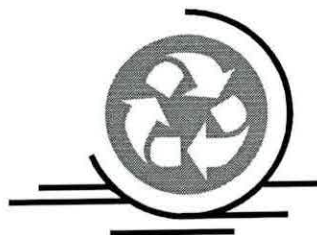
SAAHIHI YA MPOKEAJI - Recording Officer's
Signature

[Signature]

CHAO - T/A

TARIEHI - Date
2/2/09

NPO-KUITA



*Promoting Environmental,
Social & Economic
Sustainable Development*

MAKONDE CEMENT LIMITED

**P. O. Box 23418
Dar es Salaam
TANZANIA**

**Phone: +255 22 266 6617
Fax: +255 22 266 7148
Mobile: +255 76 294 2346**

STRICTLY PRIVATE & CONFIDENTIAL

27th November 2008.

The Executive Director
Tanzania Investment Centre
P.O. Box 938
Dar es Salaam



Dear Sir

**Re: TIC Registration for Certificate of Incentives – Reference 07402
TICC/PP.10/041615/2 – dated 19th December 2008.**

We refer to the above and your approval in principal of our project dated 19th December 2008.

As requested, we enclose the three outstanding issues you require in order to grant us our CERTIFICATE OF INCENTIVES as follows:

- Letter from NBC Bank – updated 26th March 2009 granting us debt finance on our project amounting to US\$ 18, 657,037.00 equivalent in Tanzanian Shillings
- Certified Documents showing evidence of land ownership for the located project in Ndumbwe Village, Mtwara.
- Current Status of the company from BRELA

We trust that the above will now enable you to arrange for the COI in order that we may proceed as planned to commence construction of our project in June 2009

Once we have the COI we shall arrange to submit the various separate applications as laid down in the regulations for the various Tax Free and other incentives.

Yours faithfully

Neil Garden
Consultant/Director
Makonde Cement Ltd
Ph + 255 783 669 644

Enclosures attached.

JAMHURI YA MUUNGANO WA TANZANIA
THE UNITED REPUBLIC OF TANZANIA

STAKABADHI YA SERIKALI

EXCHEQUER RECEIPT

NIMEPOKEA KWA

Received from

MAKONDE CEMENT LTD

37886088

1

TFN: 614 (Rev. 8.94)

KIASI
Amount

Shs.				Cts.			
1	0	0	0	0	0	0	0

JUMLA YA SHILINGI (Kwa maneno)

The sum of Shillings (Words)

U.S. DOLLAR SEVEN HUNDRED AND FIFTY

NA SENTI
And Cents

KWA MALIPO YA

In respect of

CERTIFICATE OF INCENTIVE

KWA FEDHA TASLIMU/HUNDI

NAMBA By Cash/Cheque No.

CASH

KITUO - Station

SAHIMI YA MPOKEA Receiving Officer's

Signature

[Signature]

CHEQUE -

ACC

FAREHE - Date

27th MAY 2009

ASOM

NPC-KIUTA

3

19500
FEE PAID 300
RECEIPT NO. 34476225
DATE 2/4/09

THE UNITED REPUBLIC OF TANZANIA
BUSINESS REGISTRATIONS AND LICENSING AGENCY

f/f 19,500/-
2/4/09

Annual Return of a Company
Pursuant to Section 128 of the Companies Act 2002

Company Number 63428

Name of Company (Full Name) MAKONDE CEMENT LIMITED

The information in this return is made up to: 31st DECEMBER, 2008

Address of registered office of the Company PLOT 14 MIKINDANI STREET, MIWAZA

Company type PRIVATE

(If the company does not have a share capital there must be annexed to the return a statement containing particulars of the total amount of indebtedness of the company in respect of all mortgages and charges required to be registered under the Act)

Principal business activities

If different from the registered office, state address where the register of members or any register of debenture holders is kept

Register of members

NIL

Register of debenture holders

NIL

Company Secretary

Name	RIZIKI MATILI
Previous Name(s)	NIL
Address	11727 DAR ES SALAAM

FOR OFFICIAL USE ONLY

Certified True Copy of Original Document Signed by Me

Ambrose Malamsha

Ambrose Malamsha
Advocate, Notary Public &
Commissioner for Oaths.
P.O. Box 20766
Dar-es-Salaam.

Directors

(use additional copies of this sheet if necessary)

Name	MUHAMMAD SINAN	Business occupation	DIRECTOR
Previous Name(s)	NIL	Nationality	TANZANIAN
Address	Plot 14 MIKUNDAN STREET, MIWARA	Date of birth	07/02/1972
Other relevant past or present directorships		NIL	

Name	NEIL GARDEN	Business occupation	DIRECTOR
Previous Name(s)		Nationality	TANZANIAN
Address	Plot 631 SAM NUJOMA RD DDM	Date of birth	12/08/1968
Other relevant past or present directorships			

Name	MARONDE COMPANY (SPRE) LTD	Business occupation	BUSINESS
Previous Name(s)	NIL	Nationality	
Address	Plot 631 SAM NUJOMA RD DDM	Date of birth	-
Other relevant past or present directorships		NIL	

Issued share capital

Enter details of all the shares in issue at the date of the return.

	Class	Number of shares issued	Aggregate Nominal value
1	ORDINARY	10	TSh 1000000
2	ORDINARY	10	TSh 100,000
3	ORDINARY	80	TSh 800,000
4			TSh
5			TSh

Totals: 200 TSh 10,000,000

List of past and present members
A full list is required if one was not included with either of the last two returns.

There were no changes in the period


A list of changes is enclosed (pages 4 and 5)

A full list of members is enclosed (pages 4 and 5)

I certify that the information given in this return is true to the best of my knowledge and belief.

Signed  Date 02/04/09
Director / Secretary

Certified True Copy of Original Document Signed by Me


Ambrose Malamsha
Advocate, Notary Public &
Commissioner for Oaths.
P.O. Box 20766
Dar-es-Salaam.

LIST OF PAST AND PRESENT MEMBERS (Continued on page 5)
 (Use additional copies of this sheet if necessary)

Names and Addresses	
1	MUHAMMAD SUNDI P.O BOX 17321 Dsm
2	NEIL GARDEN P.O BOX Dsm
3	MITEKONDE Comp (STORE) PLOT 631 STANLEY ROAD Dsm
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	

LIST OF PAST AND PRESENT MEMBERS (Continued from page 5)
 (Use additional copies of this sheet if necessary)

	Number of shares or amount of stock held by existing members at date of return	Particulars of shares transferred since the date of the last return (or, in the case of the first return, of the incorporation of the company) by (a) persons who are still members, and (b) persons who have ceased to be members (note 12)		Remarks
		Number/ amount transferred	Date of registration of transfer	
1	10			
2	10			
3	80			
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				

Certified True Copy of Original Document Signed by Me

Ambrose Malamsha
 Ambrose Malamsha
 Advocate, Notary Public &
 Commissioner for Oaths.
 P.O. Box 20766
 Dar-es-Salaam.

FFICI



Nº 00215639

THE UNITED REPUBLIC OF TANZANIA

Certificate of Incentives

(Section 17 of the Tanzania Investment Act, 1997)

No: 041615

This is to certify that

MAKONDE CEMENT LTD

of address P.O. BOX 767

MTWARA

has been granted a Certificate of Incentives to invest in a new, ~~rehabilitation~~ ~~expansion~~ ~~or equity of the~~ enterprise known as

MAKONDE CEMENT LTD

NDUMBWE VILLAGE

Which is located at

MTWARA

Certified True Copy of Original Document Signed by Me

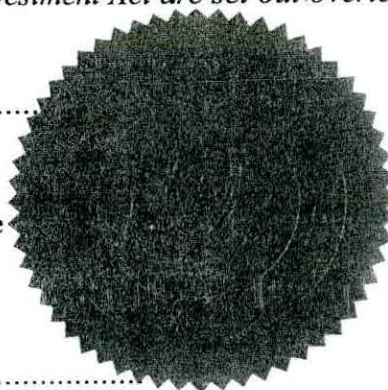
Ambrose Malamsha
Advocate, Notary Public & Commissioner for Oaths.
P.O. Box 20766
Dar-es-Salaam.

Further particulars required by Section 17 of the Tanzania Investment Act are set out overleaf.

Executive Director

Tanzania Investment Centre
P.O. Box 938, Dar es Salaam

Dated 2ND JUNE 2009




This Certificate is issued in accordance with the provisions of Section 17 of the Tanzania Investment Act, 1997 and subject to the conditions prescribed under item 14 and 15 hereafter:—

1. Shareholders

Shareholders	Nationality	Shareholding (%)
Makonde Comp (Store) Ltd	Tanzanian	30
Mohammed Sinan	Tanzanian	10
Neil Garden	Tanzanian	10
2. Proposed Activities: To establish and operate a VSK cement plant
3. Sector: Manufacturing Subsector: Cement manufacturing
4. Investment cost: Foreign USD 12.042m Local USD 19.995m Total USD 32.037m.
5. Project Financing: Equity USD 13.38m Loans USD 18.657m Total USD 32.037m.
6. Source, terms and conditions of loan
7. Assets to be invested:

Capital items:	Foreign	Local	Total
	USD 12.042m.	USD 19.995m.	USD 32.037m.
8. Technology Agreement: None
9. Date of TIC Registration: 19th December 2008
10. Implementation period: December 2008 - November 2011
11. Operative date: 1st December 2011
12. Investment Incentive Grade: As defined in part III Section 19 (1), (2) and Section 20 of the Tanzania Investment Act, 1997 And VAT as per Customs Tariff Act, 1976 & VAT Act, 1997
 - (i) Applicable Import Duty
 - (ii) Applicable with-holding Tax As per Income Tax Act, 2004 (as amended)
 - (iii) Eligibility of Capital Allowances As per Income Tax Act, 2004 (as amended)
13. Protection of Investment, Arbitration and Transfer of Foreign Currency: as defined in part III Section 21, 22 and 23 of the Act.
14. Conditions attached to this Certificate of Incentives
 - (i) Date of Commencement of investment has to be notified to the Centre.
 - (ii) Certificate not to be transferred, assigned or amended
 - (iii) Failure to commence implementation within two years invalidates Certificate
 - (iv) Failure to operate investment must be notified to the Centre
 - (v) Changes in shareholding, project activities and level of invested capital must be notified to the centre
15. Additional conditions attached to Certificate
Finished goods are not allowed under this Certificate

Signed 
Executive Director

HALMASHAURI YA WILAYA YA MTWARA
(Barua zote zitamwe kwa Mkurugenzi Mtendaji)

Simu: 023-2333928
Barua pepe: mtwararural@gmail.com



S.L.P 528,
MTWARA.

Kumb. Na. MT/P.20/58/3

19/12/2008

MHE. MWENYEKITI,
MAKONDE CEMENT LTD,
S. L. P 767,
MTWARA.

**YAH: MAOMBI YA ARDHI EKARI 20 KIJJI CHA NDUMBWE KWA
AJILI YA UJENZI WA KIWANDA CHA CEMENT**

Husika na mada tajwa hapo juu pamoja na muhtasari wa Halmashauri ya Kijiji cha Ndumbwe wa tarehe 14/12/2008 kuhusiana na mada hiyo hapo juu.

Napenda kukufahamisha kuwa Halmashauri ya Kijiji cha Ndumbwe pamoja na mkutano wa wananchi wamekubali kuwapa eneo la ardhi ekari 20 kama mlivyoomba.

Eneo hilo litatumika kwa ujenzi wa kiwanda cha saruji pamoja na ujenzi wa nyumba za watumishi kutokana na sheria ya ardhi No. 5 ya mwaka 1999 Halmashauri ya Wilaya haina pingamizi juu ya ruhusa hiyo.

Natakutakia kazi njema,

PP Saidi Swalehe

Saidi Swalehe

Kny: **MKURUGENZI MTENDAJI (W)**

MTWARA
MKURUGENZI MTENDAJI (W)
MTWARA

Certified True Copy of Original
Document Signed by Me

Ambrose Malamsha

Ambrose Malamsha
Advocate Notary Public &
Commissioner for Oaths.
P.O. Box 20766
Dar-es-Salaam.

041615

7

Gross
PLS add on
01/2/11/09

FORM 128

THE UNITED REPUBLIC OF TANZANIA

BUSINESS REGISTRATIONS AND LICENSING AGENCY



Handwritten notes and signatures in the top right corner.

Annual Return of a Company
Pursuant to Section 128 of the Companies Act 2002

Company Number 63428

Company Name
(in Full) MAKONDE CEMENT LTD

The information in this return is made up to

31st DECEMBER 2008

Address of registered office of Company

*2ND FLOOR, CBT BUILDING
ITNU ROAD, MWARA*

Company type **PRIVATE** *PRIVATE*

(If the company does not have a share capital there must be annexed to the return a statement containing particulars of the total amount of indebtedness of the company in respect of all mortgages and charges required to be registered under the Act)

Principal business activities **CONTRACTOR**

If different from the registered office, state address where the register of members or any register of debenture holder is kept

Company Secretary

Signature

MILLIE STREET
20-00 COMMERCE IN
SINGAPORE

MAKONDE GROUP (SINGAPORE) PVT LTD

OFFICIAL USE ONLY

Directors

(use additional copies of this sheet if necessary)

Issued s

Enter de

Name	MUHAMMAD SINAN I	Business occupation	DIRECTOR
Previous name(s)		Nationality	INDONESIA
Address	WUNDA, KALIAKOO DAR ES SALAM	Date of birth	11/01/1950
Other relevant past or present directorships			

Name	NEIL GARDEN	Business occupation	DIRECTOR
Previous name(s)		Nationality	SWITZERLAND
Address	SALIMA, MALAWI	Date of birth	20/08/46
Other relevant past or present directorships			

List of p
A full lis
either of

Name	MAKONSÉ GILOU (SINGAPORE) PVT. LTD	Business occupation	DIRECTOR
Previous name(s)		Nationality	SINGAPORE
Address	3 PHILLIP STREET # 18-00 COMMERCE DOWN SINGAPORE 048693	Date of birth	
Other relevant past or present directorships			

I certifi

Signed...
Director

Issued share capital

Enter details of all the shares in issue at the date of the return.

Occupation
 2004
 2005
 0
 Occupation
 2006
 2007

	Class	Number of shares issued	Aggregate nominal value
1	ORDINARY	10	TSh 1,000,000
2	ORDINARY	10	TSh 1,000,000
3	ORDINARY	80	TSh 8,000,000
4			TSh
5			TSh
Totals:		100	TSh 10,000,000

List of past and present members

A full list is required if one was not included with either of the last two returns.

16
 Occupation
 2008
 2009

There were no changes in the period

A list of changes is enclosed (pages 4 and 5)

A full list of members is enclosed (pages 4 and 5)

I certify that the information given in this return is true to the best of my knowledge and belief.

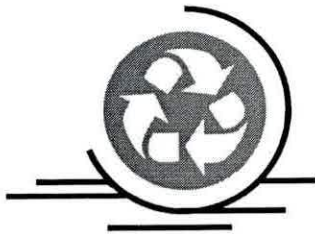
Signed: [Signature]
 Director / Secretary

Date:

LIST OF PAST AND PRESENT MEMBERS (Continued on page 5)
 (use additional copies of this sheet if necessary)

LIST OF PAS

	Names and addresses	Number of shares or amount of held by existing members at return
1	MELB GARDEN	
2	MOHAMMED SWAN,	
3	MAKONDE GROUP (SINGAPORE) PVT L	
4		1 C
5		1 S
6		S
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		



Promoting Environmental,
Social & Economic
Sustainable Development

MAKONDE CEMENT LIMITED

(4)

P. O. Box 767
Mtwara
TANZANIA

Phone: +255 23 2334396
Fax: +255 23 2334396

29th October 2009-10-29

Director General
Tanzania investment centre
P O Box 938
Dar es salaam

Discussed with Mr Vohora
on 11/11/09 about problem
The project may face if
The certificate is received
and decided to withdraw
The request to amend
IFM
12/11/09



Dear Sir,

RE Makonde Cement Ltd Certificate of incentives No 041615

We would be grateful if you could make the following amendments to the above document as it has come to our notice that we had submitted in correct information to your selves.

Shareholders

Mohammed Sinani Tanzanian
Neil Garden South african
Makonde Group (singapore) Pvt Ltd Singapore

We confirm the mistake was entirely of our own and will pay the necessary penalty fee.

Thanking you in Advance

Yours faithfully

R Vohora

TICC/PP.10 041615/16



3rd December 2009

The Chief Executive
Business Registrations and Licensing Agency
P.O. Box 9393
DAR ES SALAAM.

Sir,

**RE: APPLICATION FOR THE POSITION OF SHARE HOLDERS OF
MAKONDE CEMENT LIMITED, C.I. NO.63428 OF 12TH DECEMBER
2007.**

Please refer to the heading above.

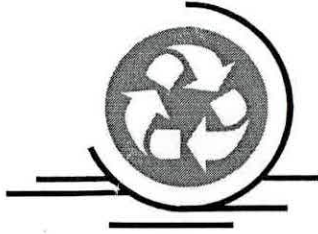
We request you to furnish us with the current status of **shareholders** of the above mentioned company incorporated in your office as shown above.

This information is necessary for us to process further the company's amended Certificate of Incentive which is kept pending on this ground.

We thank you in advance.

Yours Faithfully

G.L. Chuwa
FOR: The Executive Director



Promoting Environmental,
Social & Economic
Sustainable Development

MAKONDE DEVELOPMENT CO LTD

DIF

17

P. O. Box 767
Mtwara
TANZANIA

Phone: +255 23 2334396
Fax: +255 23 2334396

041615

Immigrant
P/se rdona
JUS
8/12/2010



4th November 2010

Chief Executive
Tanzania Investment centre
Dar es salaam

Dear Sir ,

We incorrectly applied for a Class A permit for Rajesh Vohora and duly paid USD 1782 (Receipt no 378887194 dated 17.08.09). Please treat this matter with urgency and kindly refund our money. We consider this application as cancelled as our company is also not registered at TIC.

Yours sincerely

For and behalf of Makonde Development co Ltd



MAKONDE DEVELOPMENT CO LIMITED

18

Promoting Environmental,
Social & Economic
Sustainable Development

P. O. Box 767
Mtwara
TANZANIA

Phone: +255 23 2334396
Fax: +255 23 2334396

Handwritten signature



30th December 2010

Chief Executive
Tanzania Investment centre
Dar es salaam

Dear Sir ,

With reference to our previous letter and return of your cheque refund for USD 1782 made out to Makonde Development Co Ltd. As this account is no longer i operation please Kindly Reissue a cheque made out to our accountant Mr PARESH P CHAVDA

Yours sincerely

For and behalf of Makonde Development Co ltd

Standard Chartered
Standard Chartered Bank Tanzania Limited
NIC LIFE HOUSE BRANCH

VO002816



67-05-80

Date 14/12/2010

HAFUE CHEQUE SECURITY UK 11/08

Pay Makonde Development Co.Ltd or Order

US Dollars one thousand seven hundred and eighty-two only

USD *****1,782.00

TANZANIA INVESTMENT CENTRE

025470
Cheque Number

Bank Code

A/C 8702006002000
8702006002000

Account Number

⑈002547⑈ 67⑈058004⑈ 2006002000⑈ 60

00911430

Makonde development
co. ltd

Ac. # 015-1016351300

Michael

Dwiler
0183452222

